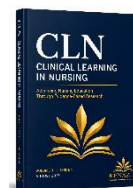


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Emergency Nursing Care for Patients with Chronic Kidney Failure with the Nursing Diagnosis of Hypervolemia: A Case Study

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ABSTRACT

Background: Chronic Kidney Disease (CKD) is an irreversible disorder characterized by progressive loss of kidney function, resulting in impaired fluid, electrolyte, and metabolic balance. Hypervolemia is a common nursing problem that may lead to edema, hypertension, and respiratory complications if not managed appropriately.

Objective: To describe the implementation of the nursing process and evaluate patient outcomes in individuals with chronic kidney disease and the nursing diagnosis of hypervolemia receiving emergency nursing care in the High Care Unit (HCU).

Methods: A descriptive case study using the nursing process approach was conducted on two patients with Chronic Kidney Disease admitted to the HCU Ciliwung Ward, Dr. Saiful Anwar Hospital, Malang, Indonesia, from December 4–6, 2024. Data were collected through interviews, physical examinations, clinical observations, medical record reviews, and nursing documentation. Data were analyzed descriptively following the stages of assessment, diagnosis, intervention, implementation, and evaluation.

Discussion: Both patients presented with oliguria, edema, pain during urination, and fluid intake exceeding output, leading to the priority nursing diagnosis of hypervolemia. Nursing interventions included hemodynamic monitoring, monitoring fluid intake and output, restricting fluid and salt intake, elevating the head of the bed to 30–40°, and collaborating in diuretic therapy. After three days, both patients showed improved urine output, reduced edema, improved fluid balance, and decreased symptoms, although hypervolemia was only partially resolved.

Conclusion: Hypervolemia management effectively improved fluid balance, hemodynamic stability, and the clinical condition of patients with Chronic Kidney Disease.

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1. Introduction

Chronic Kidney Failure is a condition of decreased kidney function that occurs continuously over a period of 3 months, resulting in a reduction in the number of functional nephrons by at least 70 to 75 percent below normal. Chronic Kidney Failure can also be defined as a disorder that occurs in the kidneys that is irreversible, where the body is unable to maintain metabolism and control the balance of electrolyte fluids, resulting in uremic retention. One of the problems that occurs in patients with Chronic Kidney Failure is hypervolemia, or commonly called excess fluid volume, a medical condition in which there is too much fluid in the body, also described as excess water retention or excess fluid. (Annisa, 2021).

The incidence of chronic kidney failure in Indonesia, based on data from Riskesdas (2018), is 0.38% of the Indonesian population of 252,124,458 people. Based on data obtained from End-Stage Renal Disease (ESRD), the global prevalence of chronic kidney disease in 2021 was 2,862,000. From this data, it can be concluded that cases of chronic kidney failure in Indonesia are also quite high. (Desika, 2021). Chronic Kidney Failure can also be caused by unhealthy behaviors such as consuming foods high in cholesterol, lack of exercise, insufficient water consumption, smoking and drinking alcohol, frequent use of medications, and consuming packaged drinks containing soda and synthetic sweeteners such as aspartame and saccharin, as well as eating foods containing herbicides and pesticides.

Hypervolemia is the main symptom in patients with mild to moderate chronic kidney disease. The adverse effect of excess fluid volume is the release of fluid from the capillaries into the interstitial space, known as edema. This condition will increase blood pressure and make the heart work harder. Excess fluid in the extracellular space can enter the lungs, causing shortness of breath. If excess fluid is not managed properly, it can result in abnormal fluid status and is associated with hypertension and congestive heart failure (CHF).

The role of nurses in treating patients with Chronic Kidney Failure with hypervolemia, commonly known as excess fluid volume, is to maintain fluid and electrolyte balance through fluid and electrolyte restriction. This is crucial because it not only reduces cardiovascular risk but also maintains nutritional status. Fluid restriction often presents a dilemma due to side effects such as dry lips and thirst, which can lead to non-compliance with fluid restrictions. Excessive drinking increases extracellular fluid volume. In addition to monitoring fluid intake and output, diuretics are often prescribed to control blood pressure and relieve symptoms of fluid overload. (Kanda Tanggo, 2022)

2. Methods

2.1.Study Design

This study employed a descriptive case study design using the nursing care process approach to describe the implementation of nursing care in patients with the identified nursing problem. The nursing process consisted of assessment, nursing diagnosis, planning, implementation, and evaluation.

2.2.Setting

The study was conducted in the High Care Unit (HCU), Ciliwung Ward, Dr. Saiful Anwar Hospital, Malang, Indonesia. Data collection was carried out over three days from December 4 to December 6, 2024.

2.3.Participants

The study involved two hospitalized patients who met the clinical criteria for the selected case. The participants were Mr. S and Mr. M., who received comprehensive nursing care during the study period. Participants were selected using a purposive case selection approach based on their diagnosis and nursing care needs.

2.4. Instruments

Data were collected using nursing assessment instruments, including structured interview guides, anamnesis forms, physical examination sheets, observation records, and patient medical records. The assessment included patient identity, chief complaint, history of present illness, past medical history, and comprehensive physical examination findings.

2.5. Data Collection

Data collection was conducted through direct interviews with the patients, observation of clinical conditions, physical examinations, review of medical records, and continuous nursing documentation during the implementation of nursing care. Information obtained from these sources was used to formulate nursing diagnoses, develop intervention plans, implement nursing care, and evaluate patient outcomes.

2.6. Data Analysis

Data were analyzed descriptively using the nursing process framework. Subjective and objective findings were organized to establish nursing diagnoses, determine appropriate nursing interventions, and evaluate patient responses. Clinical findings were then compared with existing nursing theories and standards to assess the consistency between theory and practice.

3. Results

The study found two patients with chronic kidney failure. The first patient, Mr. S, is a 72-year-old male, Muslim, and farmer. He was diagnosed with chronic kidney failure. The second patient, Mr. M, A 22-year-old male, Muslim, driver, was diagnosed with chronic kidney disease. Both patients had different complaints; namely, the first patient complained that his urine was coming out a little and there was severe pain in his genitals. Meanwhile, the second patient complained of being unable to urinate, accompanied by pain in his genitals. Based on the past health status of patients 1 and 2, they have similarities. Patient 1 has a history of smoking since young, with a history of hypertension, and the second patient has a history of smoking and drinking alcohol. Teenagers until now also have hypertension.

Based on the data found during the physical examination of patient 1 (Mr. S) the general condition was found to be weak, BP: 153/95 mmHg Pulse: 89x/minute RR: 22x/ minute, Temperature: 36 °C while patient 2 (Mr. M) general condition appeared weak, BP: 158/97mmHg Pulse: 96x/ minute Respiration: 24x/minute Temperature: 36.1 °C. From the analysis, it was found that patient 1 (Mr. S) obtained subjective data. Px said that the pain in his genital area during urination felt sore. Objective Data: There is edema in both right and left legs. Urine output is only 100cc, Intake fluid is more than output fluid.

The conclusion from the results of the nursing diagnosis assessment that appeared in the first client is Hypervolemia related to excess fluid intake as evidenced by the patient saying he felt pain in his genital area when he was urinating, there is edema in the right and left legs, the fluid intake is more than output fluid, while in patient 2 (Mr. M), subjective data obtained Px said his stomach felt sore and painful in his genital area, Px complained of not being able to urinate, Px complained of shortness of breath Objective Data, There is edema in the left leg, Intake fluid is more than output fluid The conclusion from the results of the nursing diagnosis assessment that appeared in the first client is Hypervolemia related to excess fluid intake as evidenced by the patient saying he felt pain in his stomach and genital area, px said he could not urinate, there is edema in the left leg, the fluid intake is more than output fluid. From the data grouping, the diagnoses that appear in Chronic Kidney Failure patients include Hypervolemia related to excess fluid intake, Ineffective Breathing Patterns related to respiratory effort obstruction, Self-Care Deficit related to weakness as evidenced by the client being assisted in performing ADLs such as (bathing, eating, defecating/urinating, and dressing).

Based on the emerging diagnosis, there were similarities between patient one and patient two, namely the priority diagnosis of hypervolemia. In patient 1 (Mr. S), hypervolemia is related to excess fluid intake, as evidenced by the patient saying he felt pain in his genital area when urinating, there was edema in his right and left legs, and more fluid was coming in than out. Meanwhile, in patient 2 (Mr. M), hypervolemia is related to excess fluid intake, as evidenced by the patient saying he felt pain in his stomach and genital area, he said he could not urinate, there was edema in his left leg, and more fluid was coming in than out. In nursing planning, there are similarities in the main planning, namely Hypervolemia Management. Both patients received the same nursing planning: Monitor Hemodynamic Status, monitor fluid intake and output, Limit fluid and salt intake, Raise the head of the bed 30-40 degrees, Collaborate in administering diuretics.

Evaluation of Hypervolemia diagnosis in patient 1 (Mr. S) on the third day, Saturday, December 7, 2024 at 15.40 WIB Subjective Data The patient said the pain had decreased and urination was smooth, Objective Data The edema appeared on both the patient's right and left legs had slightly decreased Urine output was 350cc more than on Friday MAP: 102 Fluid balance 110 Fluid intake and output were balanced Hypervolemia was partially resolved Intervention was stopped and the patient moved to another room, while patient 2 was diagnosed with Hypervolemia in patient 2 (Mr. M) on the third day, Saturday, December 7, 2024 at 16.10 WIB Subjective Data The patient said the pain in his genital area had decreased, Oedema was still visible on both the patient's right and left legs, Urine output was 100cc, MAP: 108, The patient was restricted to 1000cc/24 hours, The patient was still fasting, Fluid balance -74, Intervention was partially resolved, Intervention maintained.

4. Discussion

Based on data found during the assessment of patient 1 (Mr. S) on Thursday, December 5, 2024, at 11.00 WIB. A 72-year-old male patient, Muslim, works as a farmer, was diagnosed with chronic kidney failure. Assessment of patient 2 (Mr. M), Patient Aged 22 Years, Male, Muslim, Occupation as a driver, diagnosed with Chronic Kidney Failure. Assessment of the two patients in the HCU Ciliwung Room, Dr. Saiful Anwar Malang Regional Hospital, East Java Province. Based on the assessment data obtained, the similarities between patient 1 (Mr. S) and patient 2 (Mr. M) are in gender; both patients are male. And also found that the age difference between patient 1 (Mr. S) and patient 2 (Mr. M) is in patient 1 (Mr. S) is 72 years old and patient 2 (Mr. M) is 22 years old. According to the Theory of (Kidney & Stage, 2022), at the age of over 60 years, the risk of experiencing impaired kidney function, Age factors can cause kidney function failure to maintain metabolism and fluid and electrolyte balance due to progressive destruction of the kidney structure, with manifestations of accumulation of metabolic waste in the blood. Differences in decreased kidney function can occur due to age factors, and in patients, it can occur due to lifestyle factors.

Based on the data found during the assessment, patient 1 (Mr. S) had the main complaint of only a little urine coming out and severe pain in his genitals, while patient 2 (Mr. M) had the main complaint of not being able to urinate accompanied by pain in his genitals.

Based on the data obtained from the assessment results, the similarities between patient 1 (Mr. S) and patient 2 (Mr. M) are that urination comes out a little and does not come out at all, accompanied by pain in the genitals. According to the theory of (More et al., nd), the symptoms that appear in patients with chronic kidney failure are found to have various main complaints ranging from little urine output to being unable to urinate, abdominal pain, anxiety, decreased consciousness, no appetite (Anorexia), and pale skin true 4false 8, with a category of moderate intellectual impairment.

Based on the data found during the past health history review of both patients, patient one has a history of smoking since young and a history of hypertension, and patient two has a history of smoking and drinking alcohol from adolescence until now and also with hypertension.

Based on the data obtained from the assessment results, the similarities between the two patients are that they both have a history of smoking and alcohol. Based on the data found during the physical examination of patient 1 (Mr. S) in get general condition looks weak, BP: 153/95 mmHg Pulse: 89x/minute RR: 22x/minute, Temperature: 36 °C and patient 2 (Mr. M) general condition looks weak, BP: 158/97mmHg Pulse: 96x/minute Respiration: 24x/minute Temperature: 36.1 °C Based on the data from the assessment results obtained, the similarities between the two patients are weak conditions, shortness of breath, and increased high blood pressure.

Based on the data obtained from the assessment of patient 1 (Mr. S), subjective data: Px said that the pain in his genital area during BAAK felt sore. Objective Data: There was edema in both right and left legs. Urine that came out was only 100cc. The fluid that came in was more than the fluid that came out. The conclusion from the results of the nursing diagnosis assessment that appeared in the first client was Hypervolemia related to excess fluid intake, as evidenced by px saying he felt pain in his genital area when BAAK was made, there was edema in the right and left legs, and the fluid that came in was more than the fluid that came out.

Based on the data obtained from the assessment of patient 2 (Mr. M), subjective data obtained Px said his stomach felt sore and painful in his genital area, Px complained of not being able to urinate, Px complained of shortness of breath Objective Data, There was edema in the left leg, more fluid coming in than out, the conclusion from the results of the nursing diagnosis assessment that appeared in the first client was Hypervolemia related to excess fluid intake as evidenced by px saying he felt pain in his stomach and genital area, px saying he could not urinate, there was edema in the left leg, more fluid coming in than out. According to the theory of (Pada et al., 2023)

Caused by complications of hypertension, chronic glomerular damage leading to nephrotic syndrome occurs when protein leaks into the urine. This results in the kidneys not functioning properly. Hypervolemia is a major symptom in patients with mild to moderate chronic kidney disease. The adverse effect of excess fluid volume is the leakage of fluid from the capillaries into the interstitial space, known as edema.

Diagnoses that appear in patients with Chronic Kidney Failure include: 1. Hypervolemia is related to excess fluid intake, 2. Ineffective Breathing Pattern is related to respiratory effort obstruction, 3. Self-Care Deficit related to weakness is evidenced by the client being helped to perform ADLs such as (bathing, eating, defecating/urinating, and dressing).

Based on the emerging diagnosis, there were similarities between patients one and two, namely the priority diagnosis of hypervolemia. In patient 1 (Mr. S), hypervolemia is related to excess fluid intake, as evidenced by the patient saying he felt pain in his genital area when urinating, there was edema in his right and left legs, and more fluid was coming in than out. Meanwhile, in patient 2 (Mr. M), hypervolemia is related to excess fluid intake, as evidenced by the patient saying he felt pain in his stomach and genital area, he said he could not urinate, there was edema in his left leg, and more fluid was coming in than out. According to the theory of (Desika, 2021) It's said to be caused by chronic glomerular damage, leading to nephrotic syndrome, which occurs when protein leaks into the urine. This results in the kidneys not functioning properly, leading to the detrimental effect of excess fluid volume.

The data and assessments obtained regarding nursing planning have similarities in terms of the main planning, namely Hypervolemia Management. Both patients received the same nursing planning: Monitor Hemodynamic Status, Monitor fluid intake and output, Limit fluid and salt intake, Raise the head of the bed 30-40 degrees, Collaborate in administering diuretics. Based on the Theory of Hypervolemia Management Interventions, namely checking for signs

and symptoms of Hypervolemia, Monitoring Hemodynamic Status, monitoring fluid intake and output, limiting fluid and salt intake, raising the head of the bed 30-40 degrees, Collaborate in administering diuretics. (SIKI, 2017)

Based on the data and assessment obtained regarding the implementation of nursing in both patients, there are similarities regarding the implementation of observation, therapeutics, education, and collaboration. In both patients, there were The implementation equation is to check for signs and symptoms of hypervolemia, monitor hemodynamic status, monitor fluid intake and output, limit fluid and salt intake, raise the head of the bed 30-40 degrees, and collaborate in administering diuretics.

Based on nursing theory, implementation is a stage in the nursing care process that involves carrying out the nursing plan developed during the planning stage. At this stage, the nurse and patient work together to carry out the necessary actions to achieve the goals and expected outcomes of nursing care, in accordance with the outcome criteria established in the nursing plan. (Annisa, 2021)

Based on the results of the evaluation of the diagnosis of Hypervolemia in patient 1 (Mr. S) on the third day, Saturday, December 7, 2024 at 15.40 WIB Subjective Data The patient said the pain had decreased and urination was smooth, Objective Data The edema on both the patient's right and left legs appeared to have slightly decreased Urine output was 350cc more than on Friday MAP: 102 Fluid balance 110 Fluid intake and output were balanced Hypervolemia was partially resolved Intervention was stopped, the patient moved to another room.

Based on the results of the evaluation of the diagnosis of Hypervolemia in patient 2 (Mr. M) on the third day, Saturday, December 7, 2024 at 16.10 WIB Subjective Data The patient said that the pain in his genital area had decreased, there was still edema on both the patient's right and left legs, Urine output 100cc, MAP: 108, Patient was restricted to fluids of 1000cc/24 hours, Patient was still fasting, Fluid balance -74, Intervention Partially Resolved, Intervention maintained.

Nursing evaluation is a systematic and planned process carried out at the end of the care phase to compare the patient's health outcomes with previously established goals. The aim is to determine whether the nursing actions that have been carried out are effective in improving the patient's health condition or whether another approach is needed. Nursing evaluation can also help nurses evaluate the performance and quality of care provided. Subjective and objective data collected during the care process are used in nursing evaluation to determine further actions that must be taken in patient care (Annisa, 2021)

Based on the evaluation conducted by the author, there is no gap between theory and data. The theory states that nursing evaluation is an assessment of the actions taken, and the facts found in the data obtained by patient 1 (Mr. S) showed edema in both the patient's right and left legs, which had slightly decreased.

Urine output is 350cc more than on Friday, while patient 2 (Mr. M) still has visible edema on both the patient's right and left legs; urine output is 100cc, MAP: 108, the patient is restricted to fluids of 1000cc/24 hours, the patient is still fasting, and fluid balance -74 has improved slightly.

5. Conclusion

The results of the author's assessment obtained data that both patients were said to be in the Adult category with the same gender, namely Male, with the age of (Mr. S) 72 years and (Mr. M) 22 years. In the assessment data, the same complaint was obtained: (Mr. S) Px said that his urine came out a little, and there was severe pain in his genitals and shortness of breath. Subjective data: Px said that the pain in his genital area when urinating was severe. Objective data: There was edema in both right and left legs. The urine that came out was only 100cc.

The fluid that came in was more than the fluid that came out. Meanwhile, (Mr. M) Px said that he could not urinate, accompanied by pain in his genitals and shortness of breath Subjective data Px said that his stomach felt sore and pain in his genital area Px complained that he could not urinate Px complained of shortness of breath Objective Data There was edema in the left leg The fluid that came in was more than the fluid that came out.

In the assessment of patients with Chronic Kidney Failure cases, the author focuses on reviewing the priority nursing diagnosis of Hypervolemia related to excess fluid intake as evidenced by the patient saying he felt pain in his genital area when urinating, there was edema in the legs, and more fluid intake than output. Etiology of Chronic Kidney Failure. Basically, the cause of chronic kidney failure is a decrease in the glomerular filtration rate, also called a decrease in the glomerular filtration rate (GFR). Other causes include chronic glomerular disease, chronic infections, congenital abnormalities, vascular disease, and obstruction of the urinary tract.

Urinary tract infections, collagen diseases, and nephrotic medications. It can also be caused by complications from other diseases such as hypertension or diabetes mellitus. The author carried out nursing interventions on patients (Mr. S. A) and patients (Mr. M) to provide nursing care for 3x24 hours, which is expected to improve fluid intake, improve urine output, decrease dyspnea, improve pulse rate, improve blood pressure, and improve oliguria. (PPNI, Indonesian Nursing Intervention Standards 1st Edition 2nd Edition, 2018) On hypervolemia, the author can apply Hypervolemia Management interventions by checking signs and symptoms of Hypervolemia, Monitoring Hemodynamic Status, Monitoring Fluid Intake and Output, limiting fluid and salt intake, elevating the Head of the Bed 30-40 Degrees, Collaboration in administering diuretics.

Hypervolemia that has been made by the author for the first patient (Mr. S) and the second patient (Mr. M) the nursing implementation is by checking the signs and symptoms of Hypervolemia, monitoring hemodynamic status, monitoring fluid intake and output, limiting fluid and salt intake, raising the head of the bed 30-40 degrees, collaborating with the administration of diuretics Both patients were cooperative during the nursing procedures, enabling them to proceed smoothly. The results showed that both patients' complaints gradually improved, and their intake and output improved.

Based on the results of the evaluation of the diagnosis of Hypervolemia in the first patient (Mr. S) on the last day, Saturday, December 7, 2024, S: The patient said the pain had decreased, and urination was smooth. O: Edema appeared on both the patient's right and left legs, which had slightly decreased. Urine output was 350cc more than on Friday, MAP: 102, Fluid balance: 110 fluids in and out were balanced, A: Hypervolemia was partially resolved, P: Intervention was stopped, the patient moved to another room.

Meanwhile, in the second patient (Mr. M) on the last day, Saturday, December 7, 2024, S: The patient said the pain in his genital area had decreased, O: There was still visible edema on both the patient's right and left legs, Urine output 100cc, MAP: 108, Patient was restricted to fluids of 1000cc/ 24 hours, Patient was still fasting, Fluid balance -74, A: Intervention After nursing care for 3x24 hours, the patient's condition improved with improved Intake Output, the next action was an intervention that was continued independently.

References

Chairina, N., & Ahyar, J. (2020). Selamatkan otak, kenali gangguan demensia (pikun) menjelang lansia. Fakultas Kedokteran Universitas Malikussaleh.

[Desika, P. \(2021\). Asuhan keperawatan kegawatdaruratan pada pasien Ny. I dengan diagnosis medis chronic kidney disease \(CKD\) stage 5 + hipertensi di Ruang Hemodialisa RSPAL Dr. Ramelan Surabaya \[Karya tulis ilmiah yang tidak dipublikasikan\].](#)

- Hasanah, U., Dewi, N. R., Pakarti, A. T., & Inayati, A. (2023). Analisis faktor-faktor risiko terjadinya penyakit ginjal kronik pada pasien hemodialisis. *Jurnal Wacana Kesehatan*, 8(2), 96–103. <https://doi.org/10.52822/jwk.v8i2.531>
- Kanda, R. L., & Tanggo, W. D. (2022). Program Studi Sarjana Keperawatan dan Ners Sekolah Tinggi Ilmu Kesehatan Stella Maris Makassar [Skripsi yang tidak dipublikasikan]. Sekolah Tinggi Ilmu Kesehatan Stella Maris Makassar.
- Madago Nursing Journal. (2023). Pada pasien chronic kidney disease. *Madago Nursing Journal*, 4(2), 133–139.
- Persatuan Perawat Nasional Indonesia. (2017a). Standar diagnosis keperawatan Indonesia: Definisi dan indikator diagnostik (Edisi 1). Dewan Pengurus Pusat Persatuan Perawat Nasional Indonesia.
- Persatuan Perawat Nasional Indonesia. (2017b). Standar intervensi keperawatan Indonesia: definisi dan tindakan keperawatan (Edisi 1). Dewan Pengurus Pusat Persatuan Perawat Nasional Indonesia.
- Persatuan Perawat Nasional Indonesia. (2017c). Standar Luaran Keperawatan Indonesia: Definisi dan Kriteria Hasil Keperawatan (Edisi 1). Dewan Pengurus Pusat Persatuan Perawat Nasional Indonesia.