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Nursing Care for Patients with Atrial Fibrillation (AF) in the Intensive Care Unit: Case study

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ABSTRACT

Atrial fibrillation is a typical supraventricular tachyarrhythmia, with undirected atrial activation resulting in a decrease in atrial mechanical function. Objective: To identify an overview of the case study of nursing care for patients with atrial fibrillation (AF) in the Seruni ICU at Mardi Waluyo Hospital. Method: This research uses a case study design specifically designed to study in detail and in depth about a case and includes various sources of information. Results: The main nursing diagnoses that emerged in 2 managed patients were decreased cardiac output and activity intolerance. The interventions prescribed for patients with atrial fibrillation are in accordance with previously existing diagnoses and theories. The implementation carried out in patients with atrial fibrillation is in accordance with previously established interventions and adapted to the patient's condition and situation. Conclusion: The condition improved in case 1 and the problem was resolved, but in case 2 the problem was not resolved, the patient died

Keywords: Atrial Fibrillation, Nursing Care, Intensive Care Unit

Background

Atrial fibrillation is defined as an abnormal heart rhythm. The heart's rapid and irregular electrical activity causes the atria to work continuously to deliver impulses to the AV node so that the ventricular response becomes irregular. Atrial fibrillation can be acute or chronic and generally occurs in people over 50 years of age. While the incidence of atrial fibrillation in Indonesia is still high, there are also complications of atrial fibrillation, namely stroke which is the most worrying, because strokes caused by Atrial Fibrillation (AF) have a higher risk of recurrence (1).

According to Basic Health Research, the incidence of people experiencing atrial fibrillation based on the diagnosis of health workers and symptoms is highest in South Sulawesi (17.9%), Yogyakarta (16.9%), Central Sulawesi (16.6%), followed by Java East (2). Basic Health Research (Riskesdas) data for 2013 and 2018 shows an increasing trend in heart disease, namely 0.5% in 2013 to 1.5% in 2018. Data for 2015 shows that 70 percent of deaths in the world are caused by non-communicable diseases, namely 39.5 million of 56.4 million deaths. Of all deaths due to non-communicable diseases (NCDs), 45% were caused by heart and blood vessel diseases with a total of 17.7 million out of 39.5 million death(3).

Atrial fibrillation is a typical supraventricular tachyarrhythmia, in which undirected atrial activation causes a deterioration in the mechanical function of the atria. On an electrocardiogram (ECG), what can be identified as atrial fibrillation is that there are no signs of constant P waves, which are replaced by fibrillation waves that vary in amplitude, shape and

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duration (3). In normal AV function, AF is often followed by a ventricular response that is also irregular, and usually rapid. The incidence of Atrial Fibrillation (AF) increases with age, from <0.59% at 40-50 years, 5-15% at 80 years(4).

From the results of the presentation of the problem in the previous paragraph, the author is interested in making a report entitled "Nursing care for patients with atrial fibrillation (AF) in the Seruni ICU, Mardi Waluyo Hospital, Blitar" with the aim of describing nursing care for patients with atrial fibrillation (AF). In this way, the author can add insight and develop additional information to develop nursing care for atrial fibrillation patients.

Method

This research uses a qualitative method with a case study approach where the study is specifically designed to study in detail and in depth about a case and includes sources of information that are limited by time and place, and the cases studied are events, activities or individuals. This case study aims to explore the description of nursing care for patients with atrial fibrillation. Thus, researchers focus on the nursing care process starting from assessment to evaluation. This research was conducted in the Seruni ICU room at Mardi Waluyo Hospital, Blitar. The participant with the initials Mr. K and Mr. Z, male, aged 41 years and 27 years with a medical diagnosis of Atrial Fibrillation (AF). Next, the researcher carried out an assessment, determined a nursing diagnosis, planned and carried out nursing actions and evaluated the actions that had been taken.

Results

Both patients are adult males. Both patients complained of shortness of breath and fatigue, aftera chest X-ray the results showed cardiomegaly. The nursing diagnosis established in this patient's condition is decreased cardiac output and activity intolerance. The emergence of pain and decreased oxygen saturation from oximetry also resulted in a nursing diagnosis of ineffective breathing patterns and acute pain. Nursing implementation has been carried out in accordance with nursing care standards in Indonesia, so that on the third day the patient was transferred to the inpatient room

Disscus

Assessment: The gender of the two patients being managed is male. Men are at risk of developing cardiovascular disease due to unhealthy lifestyle habits such as smoking and drinking alcohol compared to women (1). Based on studies carried out on patients managed in the age range of early adulthood and late adulthood. According to Hinonaung (5), it was found that there is a significant relationship between age and coronary heart disease. Based on the results of existing research and theory, researchers are of the opinion that age is not a factor that influences the incidence of cardiovascular disease in the two patients managed.

On physical examination of the two patients being treated, the dominant symptoms experienced were cardiomegaly followed by complaints of fatigue and shortness of breath. Shortness of breath is caused by an enlarged heart or cardiomegaly which blocks it and makes it impossible for the blood to pump adequately to meet the body's needs (4). Both patients received A/P chest x-ray examination. The results of the examination in both patients were all cardiomegaly or an enlarged heart. This occurs because high pressure in the blood vessels forces the heart to work harder in pumping blood throughout the body, causing thickening of the heart muscle and loss of elasticity of the heart muscle (6). This is in line with this opinion, both patients who were treated had an enlarged heart.

Based on the results of the assessment, it was found that both patients complained that

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their bodies felt weak and weak. According to (4) Activity intolerance is defined as insufficient psychological or physiological energy to maintain or complete daily life activities that must or want to be carried out. An imbalance between oxygen supply and demand occurs when the blood supply is not smooth in the lungs (blood does not enter the heart), causing fluid to accumulate in the lungs which can reduce the exchange of oxygen and carbon dioxide between air and blood in the lungs. Based on theory and research, researchers are of the opinion that patients with heart problems often experience activity intolerance because the heart cannot pump adequately to meet the tissue's need for nutrients and oxygen so that energy production is reduced.

Diagnosis: According to the SDKI DPP PPNI working group, (7) nursing diagnosis is a clinical assessment of the experience or response of an individual, family or community to a health problem, to the risk of health problems or to life processes. The nursing diagnosis that emerged in each case was decreased cardiac output and activity intolerance. This diagnosis emerged because both patients had the same symptoms, namely an abnormal ECG picture, experiencing cold acral diaphoresis, heart rate >100x/minute. In accordance with the theory of the SDKI DPP PPNI working group,(7) that the major symptoms of diagnosis of decreased cardiac output include ECG features of arrhythmia, bradycardia/tachycardia, increased/decreased blood pressure, rapid palpable pulse and cold acral. In accordance with this theory, the two patients under management experienced these signs, resulting in a nursing problem of decreased cardiac output (7).

In the 2 patients managed, both of them experienced activity intolerance nursing problems. This is because the heart is unable to pump blood in sufficient quantities to meet the tissue's need for nutrients and oxygen due to damage to the contractile properties of the heart and cardiac output is less than normal (4).

Another result was a diagnosis of ineffective breathing patterns and acute pain in the second patient. According to Tim Pokja SIKI (8) in heart failure patients with ineffective breathing patterns this occurs because the left ventricle is unable to pump blood coming from the lungs, resulting in increased pressure in the pulmonary circulation which causes fluid to be pushed into the lung tissue so that the patient experiences shortness of breath. almost the same as the results of the case study which concluded that the main nursing problem in cases of congestive heart failure was ineffective airway clearance (9). The pain that arises often spreads to the neck, chin, arms, back, teeth and even the pit of the stomach (10). The diagnosis of acute pain was found in the second management patient (Tn.Z). Acute pain occurs due to a blockage in blood flow to the heart muscle so that the blood flow lacks oxygen and causes ischemia.

Intervention: The nursing care plan is based on a literature review based on nursing care theory. Cardiac treatment is the intervention of choice in both cases. Nursing planning that must be carried out includes identifying the characteristics of chest pain, monitoring ECG, monitoring oxygen saturation, installing intravenous access, maintaining bed rest, recommending immediate reporting of chest pain, collaborating on antiplatelate and antianginal administration (8). Oxygen therapy was given to both patients being treated. In accordance with these recommendations, oxygen therapy planning was carried out with the aim of maintaining adequate tissue oxygenation and could reduce myocardial performance due to lack of oxygen supply (1). Apart from oxygenation the management of AF patients has 5 objectives: thromboembolic events, coping with AF related symptoms, optimal management of accompanying cardiovascular disease, controlling heart rate, and improving rhythm disturbance (11).

Airway management and pain management are only given to second management patients. Energy management is provided to all managed patients. Nursing planning that must be carried out includes identifying disorders of body function that result in fatigue, monitoring physical and emotional fatigue, providing a comfortable and low-stimulus environment,

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recommending bed rest. The research results show the importance of bedrest, because bed rest is safe and can be done after AF ablation. Bed rest reduces the side effects of opioid analgesia and urinary catheterization(12). Because one of the pain therapies experienced by AF patients is opioid analgesics.

Implementation: In both cases all actions in implementation are based on interventions that have been planned by the author. The process of implementing the diagnosis of decreased cardiac output is carried out in accordance with predetermined plans. In the implementation of nursing pain management, airway management, shock prevention and activity tolerance there were no significant difficulties. Researchers can implement it well according to the plans that have been determined. According to research results, AF management mainly focuses on stroke prevention and symptom relief. Patients at high risk of thromboembolism require anticoagulation therapy, and drugs under development, especially factor XI inhibitors, promise to achieve effective anticoagulation with reduced bleeding risk. The scope of indications for catheter ablation in AF has expanded significantly (13). In addition to treatment, the application of lifestyle changes such as physical activity or appropriate dietary choices is part of the integrated treatment strategy for AF patients (14).

Evaluation: Both managed patients who experienced decreased cardiac output were given antiplatelet, antianginal, inotropic, anticoagulant and other planned therapy. Patient 1 experienced improvement and was transferred to the inpatient room after 3 days of treatment in the ICU. The second patient worsened on the 3rd day of treatment and died on the 3rd day of treatment. The problem of activity intolerance was still partially resolved because patient 1 was still advised to take bed rest for approximately 12 hours after being transferred to the inpatient room.

Conclusions and Recommendations

After the researchers carried out nursing care for Mr. K and Mr. The nursing diagnoses that emerged in the 2 managed patients were decreased cardiac output and activity intolerance. There was a significant improvement in the condition of 1 patient after implementation for 3x24 hours in the ICU. It is hoped that more medical personnel will have ALS training so that most are able and allowed to use cardiac shock devices. It is hoped that they will be more strict in limiting the number of waiters and visitors, and pay more attention to personal protection for patient waiters.

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References

1. Berry E, Padgett H. Management of patients with atrial fibrillation: diagnosis and treatment. Nurs Stand. 2012 Feb;26(22):47–56; quiz 58. https://doi.org/10.7748/ns2012.02.26.22.47.c8918
2. Kemenkes RI 2022. Profil Kesehatan Indo-nesia. Pusdatin.Kemenkes.Go.Id. 2023. Kementrian Kesehatan Republik Indonesia.
3. Fraser M, Barnes SG, Barsness C, Beavers C, Bither CJ, Boettger S, et al. Nursing care of the patient hospitalized with heart failure: A scientific statement from the American Association of Heart Failure Nurses. Hear Lung. 2024;64(February):e1–16. https://doi.org/10.1016/j.hrtlng.2024.01.007

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4. Faida A, Dewi NA, A'jun OK, Prastyo WD. ASUHAN KEPERAWATAN PADA PENDERITA JANTUNG KORONER DENGAN MASALAH INTOLERANSI AKTIVITAS DI DESA POHGEDANG, PASREPAN. 2021.
5. Hinonaung, Jelita Siska Herlina, Gobel, Iswanto, Welembuntu, Meistvin, surudani C. HUBUNGAN JENIS KELAMIN DAN INDEKS MASSA TUBUH (IMT) TERHADAP KEJADIAN PENYAKIT JANTUNG KORONER DI KAMPUNG PETTA SELATAN. Pus Penelit dan Pengabdi Kpd Masyarakat,. 2019;POLITEKNIK.
6. Ummah MS. Risk Factor Profile and Role of Cardiovascular Disease Outreach Program by Experts in Rural Communities: A Pilot Study in Magetan Regency, Indonesia. J keperawatan sudirman. 2019;11(1):1–14.
7. Tim Pokja SDKI PPNI. Standart Diagnosis Keperawatan Indonesia. Jakarta: Dewan Pengurus Pusat PPNI; 2017.
8. Tim Pokja SIKI PPNI. Standart Intervensi Keperawatan Indonesia. Jakarta: Dewan Pengurus Pusat PPNI; 2018.
9. Aulia EA, Sarwono B, Widigdo DAM. Asuhan Keperawatan Pasien Gagal Jantung Kongestif: Studi Kasus. J Ilm Keperawatan Sai Betik. 2021;16(1):99. https://doi.org/10.26630/jkep.v16i1.1714
10. Ahmad Muzaki YA. PENERAPAN POSISI SEMI FOWLER TERHADAP KETIDAKEFEKTIFAN POLA NAFAS PADA PASIEN CONGESTIVE HEART FAILURE (CHF). Nurs Sci J. 2020;1(1):19–24. https://doi.org/10.53510/nsj.v1i1.16
11. Andika GA, Sukohar A, Yonata A. Management of Arrhythmia: Atrial Fibrilation. Med Prof Lampung. 2023;11(3).
12. Freedman BL, Yang S, Shim D, D'Avila A, Waks JW, Tung P. Feasibility and safety of same-day discharge and shortened bedrest after atrial fibrillation ablation. J Interv Card Electrophysiol. 2022;65. https://doi.org/10.1007/s10840-022-01255-4
13. Hu Z, Ding L, Yao Y. Atrial fibrillation: mechanism and clinical management. Chin Med J. 2023;136(21). https://doi.org/10.1097/CM9.0000000000002906
14. Leszto K, Fr W, ´nski SK, Sinkowska J, Skwira S, Młynarska E, et al. Associations of Dietary and Lifestyle Components with Atrial Fibrillation. Nutrient. 2024;1–18. https://doi.org/10.3390/nu16030456

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