Sleep duration among patients with heart failure (HF)

By Hesti Platini

WORD COUNT 2765
TIME SUBMITTED 25-MAR-2021 07:44AM
PAPER ID 70340943

MINH MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)

Nomor: 85/M/KPT/2020

ARTICLE INFORMATION
Received: October, 13, 2020
Revised: March, 25, 2021
Available online: March, 25, 2021
at : http://ejurnalmalahayati.ac.id/index.php/nursing/index

Sleep duration among patients with heart failure (HF)

Hesti Platini*, Urip Rahayu, Leni Handayani

Fakultas Keperawatan Universitas Padjadjaran. *Email: hesti13001@unpad.ac.id

Abstract

Background: Heart disease or cardiovascular and blood vessel disease is one of the major health problems in developed and developing countries. One of the cardiovascular diseases is heart failure. Heart failure is the last stage of heart disease. The research regarding the description of demographic characteristics has a few, and necessary to conduct a study on this matter.
Purpose: To describe the demographic characteristics and Sleep duration among patients with heart failure (HF) who were hospitalization
Method: A quantitative descriptive research design, the sample taken by non-probability and purposive sampling. The number of samples of 62 participants. With criteria inclusion, patients with a diagnosis of right heart failure, functional classification New York Heart Association (NYHA) grades III and IV.
Results: The most of the patient with heart failure by a mean age of 57. 32 old and standard deviation of 5.66 old, male (62.9%), the highest level of education was junior high school (58.1%) and sleep duration in range 2-10 hours by a mean of 4.53 hours and standard deviation of 2.3 hours. Accompanying disease by hypertension of 46.9%, use of sleeping pills ≥ 3 times a week 74.2%.
Conclusion: The most patient has a sleep duration under 5 hours in 24 hours and use of sleeping pills ≥ 3 times a week. The management of heart failure to get the quality of life patients is getting better, considering that this disease is the final stage of heart disease. Good self-management compliance of sleep and rest needs through factors modifiable.

Keywords: Sleep Duration; Patient; Heart Failure

INTRODUCTION

Heart disease or cardiovascular and blood vessels disease is one of the main health problems in developed and developing countries. One of them is cardiovascular disease, namely heart failure (Ministry of Health of the Republic of Indonesia, 2019). Heart failure is known in several terms, namely left, right, and combined or congestive heart failure. Heart Failure is the inability of the heart to maintain adequate cardiac output to meet metabolic requirements and supply oxygen to the tissues despite adequate venous return (Katimenta, Carolina, & Kusuma, 2016; Stillwell, 2011). Left and right heart function abnormalities often occur simultaneously (Barret, Barman, Boitani, Brook, 2015).

In 2016, it is estimated that the death rate from heart disease will be recorded at 20 million. This figure is estimated to continue to increase and by 2030 it is estimated that the population who die from heart disease is around 23.6 million people (Ministry of Health, Indonesia, 2014) Based on basic health research 2015 data, the prevalence of heart failure in Indonesia is 0.3%. According to the Ministry of Health of the Republic of Indonesia in 2015, there were 14.468 patients treated with a

DOI: https://doi.org/10.33024/minh.v4i1.3393

diagnosis of heart failure (Ministry of Health of the Republic of Indonesia, 2015).

Research on the characteristics of heart failure patients is still limited in terms of data or volume for an overall assessment of the difference in the contribution of heart failure factors in various groups, especially age and gender strata. Likewise, the duration of sleep in heart failure patients is not yet known. Based on the results of a preliminary study, the population of heart failure patients who come to the hospital in Garut is 83 people per month. So research is needed to determine the demographic characteristics and sleep duration in patients with heart failure so that management can be carried out to improve further heart failure patients.

RESEARCH METHODS

A quantitative descriptive research design, the sample taken by non-probability and approach of purposive sampling. The number of samples of 62 participants, with criteria: patients diagnosed by of right heart failure, functional classification New York Heart Association (NYHA) grades III and IV. Hospitalisation at Garut Hospital,West Java-Indonesia. The ethical clearance taken from Padjadjaran University with a number: UN6. KEP / EC / 2019.

RESULT

Table 1. Demographic Characteristics of Participants N = 62

Variable		n	%	M±SD
Age (Years) (Range: 45-65)				57.32±5.66
Duration of illness (Years) (Range: 1-10)				4.79±2.33
Sleep Duration (Hours) (Range: 2-10)				4.53±2.30
Gender	Female	23	37.1	
	Male	39	62.9	
Education	Elementary school	14	22.6	
	Junior high school	36	58.1	
	High school	12	19.4	
Accompanying disease	DM	13	21.0	
	Hypertension	29	46.8	
	DM and Hypertension	7	11.3	
	Rheumatoid Arthritis	2	3.2	
	Chronic Obstructive Pulmonary Disease	11	17.7	
Use of sleeping pills	Never	9	14.5	
	Once a week	7	11.3	
	≥ 3 times a week	24	74.2	

Hesti Platini*, Urip Rahayu, Leni Handayani. Fakultas Keperawatan Universitas Padjadjaran.*Email: hesti13001@unpad.ac.id

DOI: https://doi.org/10.33024/minh.v4i1.3393

Based on table 1. Knowing that the most of the patient with heart failure by range of 45-65 years old, a mean age of 57. 32 old and standard deviation of 5.66 old, male (62.9%), junior high school education (58.1%). The majority using sleeping pills ≥ 3 times a week (74.2%). In the aspect of comorbidities, most of the patients have accompanied by hypertension (46.8%). The sleep duration in range 2-10 hours by a mean of 4.53 hours and standard deviation of 2.3 hours.

DISCUSSION

Based on the results of a study of heart failure patients aged 45-65 years with a mean of 57.32 and a standard deviation of 5,66. The incidence of heart failure increases exponentially with age and thus the majority of patients with heart failure are older. The majority of heart failure patients are in the age range of 65-74 years (Martinez et al, 2020). Weakness is common in heart failure patients and is associated with increasing age, comorbidity, and severity of heart failure (Sze et al, 2019). Age in heart failure patients is related to NAD (nicotinamide adenine dinucleotide). NAD is a coenzyme as a key in energy metabolism in many tissues due to aging. Age-related declines in the tissue level of NAD have emerged as a potential driving mechanism in the formation of energy metabolism disorders in the context of chronic diseases, particularly heart failure. There is a decrease in blood levels NAD for elderly patients hospitalized for heart failure (Breton et al, 2020). Increasing age will cause an increase in people with heart failure, because blood vessels undergo progressive changes and last a long time from birth to death. The earliest changes starting at age 20 are in the coronary arteries. Other arteries begin to modify only after the age of 40, occur in males aged 35-44 years and increase with age. The majority of patients who experience heart failure are> 60 years old (Donsu, Rampegan, Polii, 2020). Age can affect quality of life. Age has a significant relationship to quality of life (Akhmad, 2018). Congestive heart failure accounted for 1 million hospitalizations in 2010 in the United States and is a leading cause of hospitalization among adults over 65 years of age (Hall, Levant, & DeFrances, 2012).

Cardiovascular disease exhibits many sex-related differences in prevalence, etiology, phenotype expression, and outcome. In this study, the sex of most heart failure sufferers was male. However, other research states that the female gender has a higher rate of heart failure than men because it is related to menopause. Early menopause is associated with risk of heart failure a slightly greater(Appiah et al, 2016). Age and gender are very important, because they can be linked to quality of life. The quality of life of patients is related to gender, age, and degree of heart failure according to NYHA (Mozafarian et al, 2015).

Sleep disturbances in heart failure patients have a negative effect on sleep quality. When viewed from sleep duration, based on the results of data processing according to Table 4.3, it shows the sleep duration of heart failure patients, most of the respondents were 64.5% <5 hours. Poor sleep duration is caused by various reasons, such as experienced by this heart failure patient due to chest pain, coughing in the middle of the night, nocturnal dyspnea, which is paroxysmal thought to be caused by the movement of fluid from the tissue into the intravascular compartment and fatigue, as well as respiratory problems, so that if during sleep, the patient will wake up and find it difficult to sleep again. " Typical symptoms of heart failure patients, namely shortness of breath when resting or exerting, fatigue, and leg edema, while typical signs of heart failure are tachycardia, tachypnea, breath sounds rhonchi, pleural effusions, increased jugular veins, peripheral edema and hepatomegaly (Indonesian Association of Cardiovascular Specialists, 2015).

The prevalence of sleep disturbances in patients with chronic heart failure is associated with sleep disorder breathing and this is associated with a poorer survival of patients with chronic heart failure (Nakamura et al, 2015). Complaints experienced by heart failure patients can interfere with sleep duration. Sleep duration is calculated from the time a person sleeps until they wake up in the morning "without mentioning waking up in the middle of the night." Adults who can sleep for more than 7 hours each night can be said to have good sleep quality "(Hall, 2012). Sleep duration is not

Hesti Platini*, Urip Rahayu, Leni Handayani. Fakultas Keperawatan Universitas Padjadjaran.*Email: hesti13001@unpad.ac.id

DOI: https://doi.org/10.33024/minh.v4i1.3393

only related to physical complaints experienced, but factors other play a role in disturbing sleep duration. Factors related to sleep quality are gender, perception of health, depressive mood, and the number of comorbidities (Wang, Tsay, & Tung, 2010).

Education in this study shows the level of junior high school education is more. Patients with lower levels of education have an uncontrolled number of risk factors for poor quality of life (Ose et al, 2014). Low education is related to health literacy. There is a relationship between limited literacy and lower knowledge about health conditions in heart failure patients (Macabasco et al, 2011). The higher a person's education, the easier it will be to receive information (Agrina, Rini & Hairitama, 2011). So the level of education can be associated with the incidence of heart failure because it relates to the information obtained regarding the prevention and management of heart failure.

In this study, it can be concluded that a good modification is needed in the proper management of people with heart failure. Quality of life is important so that the health status of heart failure patients is better, so that the mortality rate can be reduced. By knowing the characteristics and duration of sleep, this becomes the basic data for further research on management advanced in patients with heart failure.

CONCLUSION

This study shows that people with heart failure are more than 55 years old and this is related to the older they are, the greater the occurrence of heart problems such as heart failure. The most gender is male with the highest education, namely the junior high school level and the duration of sleep is still lacking due to complaints experienced which is less than 5 hours. So that good management is needed in the management of heart failure so that the quality of life for heart failure patients is getting better, considering that this disease is the final stage of heart disease. Good self-management is needed to control heart failure through factors modifiable.

SUGGESTION

The sleep and rest are basic needs that must satisfy, nurses can provide psychological encouragement to achieve positive coping in an addition to the use of drugs in the patient's needs.

REFERENCES

Agrina, A., Rini, S. S., & Hairitama, R. (2011). Kepatuhan lansia penderita hipertensi dalam pemenuhan diet hipertensi. Sorot, 6(1), 46-53.

Akhmad, A. N. (2018). Kualitas hidup pasien Gagal Jantung Kongestif (GJK) berdasarkan karakteristik demografi. Jurnal Keperawatan Soedirman, 11(1), 27-34.

Appiah, D., Schreiner, P. J., Demerath, E. W., Loehr, L. R., Chang, P. P., & Folsom, A. R. (2016). Association of age at menopause with incident heart failure: a prospective cohort study and meta-analysis. Journal of the American Heart Association, 5(8), e003769.

Barrett, K. E., Barman, S. M., Boitano, S., & Brooks, H. L. (2016). Ganong's review of medical physiology.

Breton, M., Costemale-Lacoste, J. F., Li, Z., Lafuente-Lafuente, C., Belmin, J., & Mericskay, M. (2020). Blood NAD levels are reduced in very old patients hospitalized for heart failure. Experimental Gerontology, 139, 111051.

Center for Data and Information, Ministry of Health, Indonesia. (2014). Infodatin: Heart Health Situation. South Jakarta: Ministry of Health RI. Received from: https://pusdatin.kemkes.go.id/

Donsu, R. A., Rampengan, S. H., & Polii, N. (2020). Karakteristik Pasien Gagal Jantung Akut di RSUP Prof Dr. RD Kandou Periode Januari-Desember 2018. Medical Scope Journal, 1(2).

Hesti Platini*, Urip Rahayu, Leni Handayani. Fakultas Keperawatan Universitas Padjadjaran.*Email: hesti13001@unpad.ac.id

DOI: https://doi.org/10.33024/minh.v4i1.3393

Hall, M. J., Levant, S., & DeFrances, C. J. (2012). Hospitalization for congestive heart failure: United States, 2000-2010 (No. 108). US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Indonesian Association of Cardiovascular Specialists. (2015). Guidelines for the management of hypertension in disease cardiovascular. Jakarta: Indonesian Heart Association.

Katimenta, K. Y., Carolina, M., & Kusuma, W. (2016). Hubungan Tingkat Stres dengan Kualitas Tidur Pada Pasien Congestive Heart Failure (CHF) di Ruang ICCU Dr. Doris Sylvanus Palangka Raya. Dinamika Kesehatan: Jurnal Kebidanan dan Keperawatan, 7(1), 229-235.

Macabasco-O'Connell, A., DeWalt, D. A., Broucksou, K. A., Hawk, V., Baker, D. W., Schillinger, D., & Weinberger, M. (2011). Relationship between literacy, knowledge, self-care behaviors, and heart failure-related quality of life among patients with heart failure. Journal of general internal medicine, 26(9), 979-986.

Martinez, F. A., Serenelli, M., Nicolau, J. C., Petrie, M. C., Chiang, C. E., Tereshchenko, S., & Ponikowski, P. (2020). Efficacy and safety of dapagliflozin in heart failure with reduced ejection fraction according to age: insights from DAPA-HF. Circulation, 141(2), 100-111.

Ministry of Health of the Republic of Indonesia (2019). Hypertension, the most common disease in society. Jakarta: Ministry of Health of the Republic of Indonesia. Received from: https://www.kemkes.go.id/article/view/19051700002/hypertension-penyakit-paling-banyak-diidap Masyarakat.html

Ministry of Health of the Republic of Indonesia. (2015). Indonesia Health Profile 2015. Jakarta: Ministry Health of the Republic of Indonesia. Received from: https://www.pusdatin.kemkes.go.id/article/view/16091600001/profil-keseh-indonesia-tahun-2015.html

Mozaffarian, D., Benjamin, E. J., Go, A. S., Arnett, D. K., Blaha, M. J., Cushman, M., & Huffman, M. D. (2015). Executive summary: heart disease and stroke statistics—2015 update: a report from the American Heart Association. Circulation, 131(4), 434-441.

Nakamura, S., Asai, K., Kubota, Y., Murai, K., Takano, H., Tsukada, Y. T., & Shimizu, W. (2015). Impact of sleep-disordered breathing and efficacy of positive airway pressure on mortality in patients with chronic heart failure and sleep-disordered breathing: a meta-analysis. Clinical Research in Cardiology, 104(3), 208-216.

Ose, D., Rochon, J., Campbell, S. M., Wensing, M., Freund, T., Lieshout, J. V., & Ludt, S. (2014). Health-related quality of life and risk factor control: the importance of educational level in prevention of cardiovascular diseases. The European Journal of Public Health, 24(4), 679-684.

Stillwell, S. B. (2011). Pedoman Keperawatan Kritis. Penerbit buku kedokteran EGC Jakarta.

Sze, S., Pellicori, P., Zhang, J., Weston, J., & Clark, A. L. (2019). Identification of frailty in chronic heart failure. JACC: Heart Failure, 7(4), 291-302.

Wang, T. J., Lee, S. C., Tsay, S. L., & Tung, H. H. (2010). Factors influencing heart failure patients' sleep quality. Journal of Advanced Nursing, 66(8), 1730-1740.

Hesti Platini*, Urip Rahayu, Leni Handayani. Fakultas Keperawatan Universitas Padjadjaran.*Email: hesti13001@unpad.ac.id

DOI: https://doi.org/10.33024/minh.v4i1.3393

Sleep duration among patients with heart failure (HF)

ORIGINALITY REPORT

0%

SIMILARITY INDEX

PRIMARY SOURCES

EXCLUDE QUOTES	ON	EXCLUDE MATCHES	< 10%
EXCLUDE BIBLIOGRAPHY	ON		