Stress with the Incidence of Hypertension in the Internal Care Room of the Jayapura Regional General Hospital

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Abstract

Hypertension is a condition where a person experiences an increase in blood pressure above normal which results in morbidity (mordibility) and mortality/mortality. Blood pressure 140/90 mmHg is based on two phases in each heartbeat, namely the systolic phase of 140 mmHg indicating the phase of blood being pumped by the heart and the diastolic phase of 90 mmHg indicating the phase of blood returning to the heart. The purpose of this study was to determine the relationship between stress and the incidence of hypertension. The research method used in this study is a surveya nalytic study using a cross-sectional design, namely each respondent is only observed once and the measurement of the respondent's variables is carried out at the time of the examination. The population in this study were all patients with hypertension who were hospitalized in the Internal Medicine room, totaling 54 people. From the results of research on the relationship between stress and the incidence of hypertension in the Interna Treatment Room of Jayapura Regional General Hospital, it can be concluded that there is a relationship between stress and the incidence of hypertension in the Interna Treatment Room of Jayapura Regional General Hospital with a significant value obtained $\rho < \alpha$ (0.036 < 0.05).

Keywords: Stress, Incidence of Hypertension, Internal Care, Jayapura Regional General Hospital.

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1. Introduction

Hypertension is a condition where a person's blood pressure is above the limits of normal blood pressure, the normal limit is 120/80 mmHg which means systolic pressure of 120 mmHg and diastolic pressure of 80 mmHg. Hypertension is also called the silent killer (Susilo, 2011).

1) Types of Hypertension

Hypertension is divided into 2 types, namely (Susilo, 2011):

   a. Primary or essential hypertension is a condition that is much more frequent and covers 95% of hypertension.
   b. Secondary hypertension is 5% of hypertension caused by a specific disorder in one of the organs or body systems.

2) Etiology

The causes of hypertension can be distinguished according to the type of hypertension, namely primary (essential) hypertension is high blood pressure caused by abnormal water and salt retention, sensitivity to angiotensin, obesity, hypercholesteromia, emotional disturbance / stress and smoking. Meanwhile, secondary hypertension is high blood pressure caused by adrenal gland disease, kidney disease, toxemia gravidarum, increased intra cranial pressure, caused by brain tumors, and the influence of certain drugs such as contraceptive drugs (La Ode, 2012: 243).

Stress tends to cause a rise in blood pressure for some time. If the stress has passed, blood pressure will usually return to normal. The heart muscle and some blood vessel walls have receptors that monitor changes in arterial and venous blood pressure. If there is a change in pressure, these receptors will send signals to the brain to normalize blood pressure, through the release of hormones and enzymes that work on the heart, blood vessels, and kidneys, so that normal pressure is achieved (Junaidi, 2010).

When you are stressed, the hormone epinephrine or adrenaline will be released. Adrenaline will increase blood pressure through arterial contraction (vasocontraction) and increase heart rate. If the stress continues, the blood pressure will remain high so that the person experiences hyprtension (Junaidi, 2010).
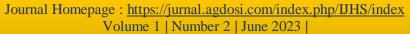
The effect of stress on increasing blood pressure for each person is different. It is very individual; some people can cope with difficult and stressful situations so that they do not cause prolonged stress. However, there are also people who cannot cope with complicated situations so that they become stressed. This is due to the innate nature of a person who responds differently to stressors. A situation that is perceived as a trigger to

become better and progress (positive stress) by one person, can be responded to as a threat (negative stress) by another. One may see it as an encouragement, while another may see it as a burden and become very depressed. Therefore, it is very important to train and familiarize yourself with managing all types of circumstances (Junaidi, 2010).

2. Research Method

The research method used in this study is a survey analytic study using a cross-sectional design, namely each respondent is only observed once and the measurement of respondent variables is carried out at the time of the examination. The population in this study were all patients with hypertension who were hospitalized in the Internal Medicine room, totaling 54 people.

3. Results And Discussions

a. Result

Variable analysis is a way of analyzing by describing or describing the collected data as it is without making conclusions that apply to the public or generalizations. In general, this analysis only results in the distribution and percentage of each variable. The variable analysis in this study is the independent variable and the dependent variable which includes stress and the incidence of hypertension.

1. Distribution of respondents based on stress

Table 1
Distribution of Respondents Based on Stress in the Internal Treatment
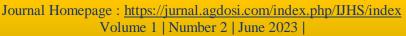Room of Regional General Hospital, Jayapura Regency

Stress	Frekuensi (n)	%
Normal	19	39,6
Stress	29	60,4
Total	48	100

Table 1 shows that the distribution of respondents based on stress in the Interna Treatment Room of Jayapura Regional General Hospital with normal was 19 respondents (39.6%) while those who experienced stress were 29 respondents (60.4%) with a total of 48 respondents (100%).

2. Distribution of respondents based on the incidence of hypertension

Table 2

Distribution of Respondents Based on the Incidence of Hypertension in the Room
Jayapura Regional General Hospital Internal Medicine

Incidence of Hypertension	Amount (n)	%
Mild Hypertension	11	22,9
Moderate Hypertension	22	45,8
Severe Hypertension	15	31,3
Total	48	100

Table 2 shows that the distribution of respondents based on the incidence of hypertension in the Jayapura Regional General Hospital Internal Treatment Room with mild hypertension was 11 respondents (22.9%) while the incidence of moderate hypertension was 22 respondents (45.8%) and the incidence of severe hypertension was 15 respondents (31.3%) with a total of 48 respondents (100%).

3. Analisa Bivariat
    This analysis is used to determine the relationship between the independent variable and the dependent variable, namely the relationship between stress and the incidence of hypertension in the Jayapura Regional General Hospital Internah Care Room.

Table 3

The relationship between stress and the incidence of hypertension in the internal medicine room Jayapura Regional General Hospital

Stress	Incidence of Hypertension						Total		X^2	ρ Value
	Mild Hypertension		Moderate Hypertension		Severe Hypertension					
	F	%	F	%	F	%	f	%		
Normal	8	42,1	7	36,8	4	21,1	19	100	6,654	0,036
Stress	3	10,3	15	51,7	11	37,9	29	100		
Amount	11		22		15		48	100		

Table 3 above shows that out of 19 people who did not experience stress or normal there were 8 (42.1%) respondents who experienced mild hypertension, 7 (36.8%) respondents who experienced moderate hypertension and 4 (21.1%) respondents who experienced severe hypertension. Meanwhile, of the 29 respondents
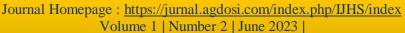
who experienced stress, 3 (10.3%) respondents experienced mild hypertension, 15 (51.7%) respondents experienced moderate hypertension and 11 (37.9%) respondents experienced severe hypertension.

From the results of statistical tests obtained a value of $p = 0.036 < \alpha = 0.05$, so statistically Ha is accepted, meaning that there is a significant relationship between stress and the incidence of hypertension in the Internah Treatment Room of Jayapura Regional General Hospital.

b. Discussion

The results showed that out of 19 people who did not experience stress or normal there were 8 (42.1%) respondents who experienced mild hypertension, 7 (36.8%) respondents who experienced moderate hypertension and 4 (21.1%) respondents who experienced severe hypertension. Meanwhile, of the 29 respondents who experienced stress, 3 (10.3%) respondents experienced mild hypertension, 15 (51.7%) respondents experienced moderate hypertension and 11 (37.9%) respondents experienced severe hypertension. The results of the statistical test show that there is a significant relationship between stress and the incidence of hypertension in the Internal Treatment Room of Jayapura Regional General Hospital.

The results of this study, there is a relationship between stress and the incidence of hypertension, namely people who are psychiatrically stressed experience hypertension. Stress increases sympathetic nerve activity, which can increase blood pressure gradually, which means that the more stressed a person is, the higher their blood pressure will be. Another problem is that in some circumstances negative emotions such as anxiety and depression often arise slowly without realizing it and the individual only realizes it when physical symptoms arise, such as hypertension.

4. Conclusion

From the results of research on the relationship between stress and the incidence of hypertension in the Interna Treatment Room of Jayapura Regional General Hospital, it can be concluded that there is a relationship between stress and the incidence of hypertension in the Interna Treatment Room of Jayapura Regional General Hospital with a significant value obtained $\rho < \alpha$ (0.036 < 0.05).

5. Compliance with ethical standards

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Disclosure of conflict of interest

This research collaboration is a positive thing for all researchers so that conflicts, problems and others are absolutely no problem for all writers.

Statement of informed consent

Every action we take as authors is a mutual agreement or consent.

References

1. Astuti, Widya. 2011. Nutrition Science in Nursing. Trans Info Media: Jakarta.
2. Aziz, Alimul. 2014. Nursing Research Methods and Data Analysis Techniques. Salemba Medika: Jakarta.
3. Anggreani, Novita and Nasution, Johani Dewita. 2019. Relationship between Knowledge and Attitude of Elderly with History of Hypertension in Blood Pressure Control in the Elderly at Sibolangit Health Center, Deli Serdang Regency in 2019. Publication Manuscript.
4. Andi Nursinah, Maryam Marzuki, Sarifudin Andi Latif, Naomi Malaha, Muhammad Qasim, Rahmat Pannyiwi, Pengetahuan Dan Dukungan Keluarga Terhadap Keaktifan Lanjut Usia , Barongko: Jurnal Ilmu Kesehatan: Vol. 1 No. 2 (2023): Barongko : Jurnal Ilmu Kesehatan (Maret).
5. Daeli, Fynce Sonifati. 2017. Relationship between Knowledge Level and Patient Attitude
   Hypertension with Hypertension Control Efforts at Uptd Puskesmas South Gunungsitoli Sub-district, Gunungsitoli City 2017.
6. Dewi Pudiastuti. 2013. Deadly Diseases. Nuha Medika: Yogyakarta.
7. Hawari, Dadang, 2013, Management of Stress, Anxiety and Depression. Faculty of Medicine, University of Indonesia: Jakarta.
8. Junaidi Iskandar. 2010. Hypertension-Introduction and Treatment. Buana Popular Science: Jakarta.
9. Indonesian Ministry of Health. 2019. World Hypertension Day 2019: "Know Your Number, Control Your Blood Pressure with Ingenuity. Article.
   http://p2ptm.kemkes.go.id/kegiatan-p2ptm/dki-jakarta/hari-hipertensi-dunia2019-know-your-number-kendalikan-tekanan-darahmu-dengan-cerdik. July 2, 2021 (15.20).
10. Indonesian Ministry of Health. 2019. National Basic Health Research Report 2018. Agency for Health Research and Development. Jakarta. Notoatmodjo, Soekidjo. 2010. Health Promotion Theory and Application. PT Rineka Cipta. Jakarta.

11. La Ode. 2012. Gerontic Nursing Care. Nuha Medika: Yogyakarta.

12. Muh. Ali. 2012. Risk Factors That Play the Most Role in Hypertension in the Community in Jatipuro District Karangayar: Karangayar

13. Nursalam. 2013. Nursing Science Research Methods.Salemba Medika: Jakarta.

14. Priyoto. 2014. Stress Management Concept. Nuha Medika: Yogyakarta.

15. Putu Yuda. 2011. Early Detection and Prevention of 7 Diseases that Cause Young Death. Medpress: Yogyakarta.

16. Patasik C. K., Tangka, Rottie J. (2013). Effectiveness of Deep Breath Relaxation Techniques and Guided Imagery on Pain Reduction in Postoperative Setio Caesare Patients in Irina D BLU RSUP Prof.Dr.R.D. KANDOU MANADO. E-Journal of Nursing. Vol. 1 No. 1 [6].

17. Prihatini, S., Samila, S., Febrianti, N., Masdarwati, M., Maran, A. A., Qasim, M., & Alim, A. (2023). Penyuluhan Penyakit Tidak Menular (Hipertensi) Pada Ibu Hamil Di Kelurahan Bonto Kio Kecamatan Minasatene. Sahabat Sosial: Jurnal Pengabdian Masyarakat, 1(3), 99–104. https://doi.org/10.59585/sosisabdimas.v1i3.71

18. Syahriyani ST. (2010). The Effect of Relaxation Techniques on Changes in Pain Intensity in Postoperative Appendicectomy Patients in the Surgical Treatment Room of RSU TK II Pelamonia Makassar.

19. Riskesdas. 2013. Basic health research. Jakarta. (online), (http://depkes.go.id/downloads/riskesdas2013/Hasil%20Riskesdas%202013.pdf) accessed November 6, 2014.

20. Riyanto, Agus. 2011. Application of Health Research Methodology. Nuha Medika: Yogyakarta.

21. Sugiharto, Aris. 2012. Risk Factors for Hypertension Gtade II in the Community in Karanganyar Regency.

22. Saraswati, Dian, Abdurrahmat, Asep Suryana, Novianti, Siti. 2018. The Relationship between Family Social Support and Knowledge with Hypertension Control Behavior in the Karangnunggal Health Center Working Area, Tasikmalaya Regency. Gorontalo Journal Health and Science Community 2(2): 283- 296.

23. Susilo, Yekti. 2011. The right way to overcome hypertension. Andi Publisher: Yogyakarta.

24. Triyanto, E. 2014. Nursing Services for Patients with Hypertension in an Integrated manner. Graha Ilmu : Yogyakarta.

25. Yosep, Iyus. 2009. Mental Nursing. Bandung: PT Rapika Aditama.