

Long-Standing Relationship of Smoking with Hypertension Incidence in Puskesmas Kenyaran District Patan Cuaca Gayo Lues District

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ABSTRACT

Hypertension is a silent disease because people do not know themselves to have hypertension due to too long smoking. The purpose of the study is to find out the Long-Standing Relationship of Smoking with Hypertension Incidence in Puskesmas Kenyaran Patan Weather District Gayo Lues District Year 2019. This research is quantitative; the study's design is a descriptive correlation with a cross-sectional approach. The population in this study was hypertensive. Sampling technique of 30 total samplings Chi-square test results obtained a significant value P value $(0.001) < (0.05)$ there is a substantial relationship between the Long Relationship of Smoking and Hypertension Incidence in Puskesmas Kenyaran Patan Weather District Gayo Lues District in 2019. This study concludes that cigarettes have nicotine content that can increase the hormone epinephrine that can narrow the blood supply of arteries. It is recommended to health officials to provide counseling on the dangers of smoking for hypertension sufferers.

Keywords: Long Smoking, Hypertension

INTRODUCTION

High blood pressure or hypertension means high pressure in the arteries. Arteries are vessels that transport blood from the heart that pumps throughout the body's netting and organs. High blood pressure does not mean excessive emotional strain, although emotional tension and stress can temporarily increase blood pressure. Normal blood pressure is below 120/80; the average force between 120/80 and 139/89 is called

"pre-hypertension," and blood pressure of 140/90 or above is considered high (Irianto, 2015).

Hypertension is a condition of increased blood pressure in the arteries when the heart is contracting (systolic) equal to or above 140 mmHg and blood pressure when the heart is relaxing (diastolic) similar to or above 90 mmHg (WHO, 2013). Hypertension is one of the essential factors as a trigger for non-communicable diseases (NCD) such as heart disease, stroke, and others that are currently the scourge of the number one cause of death in the world (Ministry of Health, 2015).

Hypertension is a silent disease because people do not know they have hypertension before checking their blood pressure. Hypertension is the most significant cause of stroke, both systolic and diastolic blood pressure (Rudianto, 2013)

It is estimated to have caused 30% of deaths worldwide, and its prevalence of 37.4%. Of the various surveys obtained in the last ten years, hypertension prevalence increased meaningfully. Hypertension is a contributor to non-communicable disease deaths (PTM), which increased from 41.7% to 60%. The last survey in Indonesia showed PTM dominated the top 10 death rates in all age groups, with stroke being the number one cause of death. (Ministry of Health, 2013).

The dangers of hypertension are estimated to be as many as 15 million

Indonesians, but only 4% are controlled, meaning those who suffer from hypertension and know they suffer from hypertension. More than 50% of sufferers do not realize themselves as hypertension sufferers; therefore, they tend to suffer more hypertension because they do not change and avoid risk factors (Abidin & Nawi, 2011).

In Indonesia, the number of deaths from diseases caused by smoking habits reaches 300 thousand per year. Nearly 60 percent of Indonesia's deaths are caused by non-communicable diseases (PTM) caused by cigarettes such as stroke, hypertension, and heart disease, which are now increasing in number. This threatens economic growth because the PTM that initially occurred in old age is now starting to strike at a younger age. The prevalence of smokers in Indonesia, with the age of over 15, continues to increase. Smokers with age 5 based on Riskesdas in 2010 occurred in several provinces, and the largest is in East Java, Central Java, West Java, DI Yogyakarta, and South Sumatra (Juliyah, 2012).

Of the 33 provinces in Indonesia, there are eight provinces where cases of hypertension exceed the national average: South Sulawesi (27%), West Sumatra (26%), East Java (25%), North Sumatra (24%), South Sumatra (24%), Riau 23%, and east Kalimantan 22%. While in comparison, in cities in Indonesia, hypertension cases tend to be high in urban areas such as Jobadetak, Medan, Bandung, Surabaya, And Makassar, Which Reaches 30-34%. (Eka, 2011 In Goddess, 2013).

Based on preliminary data taken at Puskesmas Kenyaran Patan Weather District Gayo Lues District dated January 02, 2019, From the data found, researchers are interested in researching "The Long Relationship of Smoking With Hypertension Incidence in Puskesmas Kenyaran Patan Weather District Gayo Lues District.

METHODOLOGY

This research uses a cross-sectional research design conducted in Puskesmas Kenyaran Patan Weather District Gayo Lues Regency. The research was conducted from February 11-16, 2019. The population that was the focus of this study was hypertension sufferers in Puskesmas Kenyaran Pantan Cuaca District Gayo Lues District and from the initial data collection in the community of 30 people. The sampling technique used in this study is Total sampling. Total sampling was used in this study because sampling was conducted using the entire population of 30 hypertensive patients- statistical analysis used with chi-square.

RESULTS

Table 1: Demographic Data of Respondents in Patan District of Gayo Lues District

No	Demographic Data	Frequency	Percentage (%)
1	Age		
	17-25 years old	5	16,7
	26-35 years old	16	53,3
	>35 years old	9	30,0
	Amount	30	100%
2	Study		
	Elementary School	11	36,7
	Junior High School	8	26,7
	Senior High School	7	23,3
	Undergraduated	4	13,3
	Amount	30	100%
3	Job		
	Civil Servants	2	6,7
	Private Employees	17	56,7
	Self employed	5	16,7
	Housewife	6	20,0
	Amount	30	100%

Based on a table of demographic data of respondents of Puskesmas Kenyaran Pantan Cuaca District Gayo Lues majority mothers aged 17-25 years old as many as 16 people (53.3%), the majority are elementary school educated as many as 11 people (36.7%). I am working as an IRT for six people (20.0%). 4.2.2 Distribution of long-term frequency of smoking in Puskesmas Kenyaran Patan District Weather District Gayo Lues. The distribution of the extended frequency of smoking in Puskesmas Kenyaran Patan District Weather District Gayo Lues Year 2019 can be seen in the following table:

Table 2: Distribution of extended frequency of smoking in Puskesmas Kenyaran Patan District Weather District Gayo Lues Year 2019

Long-term Relationship of Smoking	Frequency	%
Light	6	20,0
Middle	10	33,3
Heavy	14	46,7
Amount	30	100

Based on table above there is a long smoking majority of respondents as much as 14 people (46.7%)

Table 3: Frequency Distribution of Hypertension Events in Puskesmas Kenyaran Pantan District Weather District Gayo Lues.

Incidence of Hypertension	Frequency	%
Light	8	26.6
Middle	10	33.3
Heavy	12	40.0
Amount	30	100

Based on table above there is a incidence of severe hypertension as many as 12 people (40.0%)

Table 4: Frequency distribution of the long-term relationship of smoking with hypertension events in Puskesmas Kenyaran Pantan Weather District Gayo Lues District

No	Long-term Relationship of Smoking	Incidence of Hypertension						Total		P
		Light		Middle		Heavy		N	%	
		N	%	N	%	N	%			
1	Ringan	3	10.0	2	6.6	1	3.3	6	20	0,001
2	Sedang	3	10.0	5	16.6	2	6.6	10	33.3	
3	Berat	2	6.6	3	10.0	9	30.0	14	46.6	
Total		8	26.6	10	33.3	12	40	30	100	

Based on table can be long smoking majority as many as 14 people (46.4%) there was a incidence of severe hypertension as many as 9 people (30.0%) and the length of light smoking as many as 6 people (20.0%) mild hypertension of 3 people (10.0%).

Based on the chi-square test obtained a significant value p value (0.001) < (0.05) there is a significant relationship between the length of smoking and the incidence of hypertension in puskesmas Kenyaran Pantan Weather District Gayo Lues District.

DISCUSSION

Bivariate results

Smoking in Puskesmas Kenyaran Pantan District Gayo Lues District

Smoking is one of the life habits that can affect the health of blood vessels. In the state of smoking, blood vessels in some parts of the body will be narrowed, in this condition it takes a higher pressure so that blood can flow to the organorgan body with a fixed amount. Therefore the heart should pump blood more strongly, so that the pressure on the blood vessels increases. The effect of smoking will result in vasoconstriction of peripheral blood vessels and vessels in the kidneys resulting in an increase in blood pressure (Dadang, 2010).

Based on table 3 there are long smoking respondents in Puskesmas Kenyaran Pantan District Weather Gayo Lues Regency majority heavy. Based on the Educational Characteristics of most respondents namely lower education (Elementary /Junior High School). From the statement some resonden stated that never given counseling by health officials especially nurses about the impact of cigarettes on health so this can almost certainly have a negative impact on his behavior. Negative attitudes about smoking can still be changed if individuals get positive environmental feedback, experiences, or behaviors that do not support smoking behavior (Linda, 2010).

Hypertension Events in Puskesmas Kenyaran Pantan District Weather Gayo Lues Regency

Definition of Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg at twice the measurement with an interval of five minutes in a sufficiently rested/calm state. Long-term (persistent) increases in blood pressure can cause damage to the kidneys (kidney failure), heart (coronary heart disease) and brain (causing stroke) if not detected early and

receive adequate treatment. Many hypertensive patients with uncontrolled blood pressure and the number continues to increase. Therefore, the participation of all parties, both doctors from various areas of hypertension interest, government, private and public is necessary for hypertension to be controlled (Ministry of Health, 2017).

Based on table 4 above at Puskesmas Kenyaran Pantan District Weather District Gayo Lues there is an incidence of severe hypertension. This is supported by the demographic data of elementary school-educated respondents, because the higher the respondent's education, the more knowledge and information that the respondent will receive in living life. The results of this study did not match the results of his research conducted by Nurhidayat (2015), showing no meaningful relationship between lower and upper secondary education and compliance in carrying out the compliance of coronary heart patients.

Research conducted by Petch (2011) reinforces that the level of education with the coronary heart has no relationship between education and coronary heart. This is because it is not forever a patient who is educated at a basic level of knowledge about low coronary heart disease and also not all patients who are middle educated and above the level of knowledge about coronary heart disease are high.

Long-standing relationship of smoking with hypertension in Puskesmas Kenyaran Pantan District Weather District Gayo Lues

Based on the chi-square test obtained a significant value p value (0.001) < (0.05) there is a significant relationship between the length of smoking and the incidence of hypertension in puskesmas Kenyaran Pantan Weather District Gayo Lues District. This is in line with the results of the study (Linda, 2010). The results of this study mean that < the longer the respondent smokes the higher the hypertension rate.. It is said that the higher the risk if the respondent smokes ≥ 15 stems

per day and it is said that the lower the risk if the respondent smokes < 25 stems per day >. So in this study it is known that their degree of hypertension increases so that they are very at risk of suffering from stage III hypertension. In addition, more people smoke >15 stems per day. Based on the results of the analysis it can be known that those who smoke >15 stems are at risk of suffering a higher degree of hypertension in comparison to those who smoke, <15 sows in a day. (Linda, 2010).

Substances contained in cigarettes can damage the lining of the artery walls in the form of plaque. This causes narrowing of arterial blood pressure which can increase blood pressure. Its nicotine content can increase the hormone epinephrine which is biased to narrow the blood supply of arteries. Its carbon oxide can cause the heart to work harder to replace the oxygen supply to the body's tissues. Tougher heart work can increase blood pressure. Various studies prove cigarettes are at risk to the heart and blood--(Aggie & Herbert, 2012). The longer a person smokes cigarettes it will have a major effect on the increase in blood pressure or hypertension. This can be caused because co-gas produced by cigarette smoke can have a major effect on the increase in blood pressure. If it is consumed continuously it will accumulate inside the walls of blood vessels and cause blood vessels to "kramp" so that blood pressure rises, this increase occurs because nicotine narrows the blood vessels thus forcing the heart to work hard. As a result heart rate and blood pressure increase. (Yashinta, 2015).

CONCLUSION

There are long smoking respondents in Puskesmas Kenyaran Pantan Weather District Gayo Lues regency majority heavy. In Puskesmas Kenyaran Pantan Weather District Gayo Lues district there is a severe hypertension event. Based on the chi-square test obtained a significant value p value (0.001)<(0.05) there is a significant relationship between the length of smoking

and the incidence of hypertension in Puskesmas Kenyaran Pantan Weather District Gayo Lues District.

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