

Description of the Prevalence of Hypertension in Ambon Port Health Office (Case Study of Clinical Data in Ambon KKP Work Area in 2016)

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ABSTRACT

Hypertension is one of the risk factors that play a role in the occurrence of cardiovascular disease. At Ambon Port Health Office the prevalence is 35.8%. Although prevalence is known but the prevalence distribution according to people, place and time is unknown. So the purpose of this study was to describe the prevalence and distribution of hypertension events according to people, place and time in the work area of the Ambon Port Health Office. This type of research is descriptive observational research with case study research design. The population in this study were all hypertensive patients who were recorded at the Ambon Port Health Office clinic totaling 135 people. The sample from this study is the whole of the population. Data analysis was univariate analysis to describe the characteristics of the respondents, bivariate analysis to describe the risk factors for hypnosis. The results showed that the proportion of hypertension aged ≥ 50 years (40.7%), male sex (53.3%), had a family history of disease (54.5%), status as a smoker (62.6), consuming alcoholic beverages (52.6%) and obesity (51.9%).

Keywords: Prevalence, Hypertension, Ambon Port Health Office

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BACKGROUND

Non-communicable diseases (PTM) are a major cause of death globally. Data from the World Health Organization (WHO) shows that of the 57 million deaths that occurred in the world in 2008, 36 million or almost two thirds were caused by PTM. The proportion of PTM deaths in people aged less than 70 years, cardiovascular disease is the biggest cause (39%), followed by cancer (27%), while chronic respiratory diseases, digestive diseases and other PTM together cause around 30% of deaths and 4% of deaths due to diabetes.

Increased blood pressure, or commonly referred to as hypertension, is one of the risk factors that play a role in the occurrence of cardiovascular disease. Hypertension is a disorder of blood vessels which results in the supply of oxygen and nutrients carried by the blood blocked to the tissues of the body that needs it. Hypertension often appears asymptomatic and is often referred to as The Silent Killer.

Globally, WHO data in 2011 showed that around 972 million people in the world or 26.4% of the inhabitants of the earth had hypertension with a ratio of 26.6% of men and 26.1% of women. 2013 Basic Health Research (Riskesdas), the prevalence of hypertension in Indonesia based on interviews increased from 7.6 percent in 2007 to 9.5 percent in 2013. Hypertension generally occurs in the elderly. Several studies have shown that hypertension can emerge since adolescence and its prevalence has increased over the past few decades, but many have not yet realized that it is the cause of hypertension in adults and the elderly. In the analysis of hypertension is limited to the age of 15-17 years according to the Joint National Committee (JNC) VII 2013 found national prevalence of 5.3 percent (men 6.0% and women 4.7%), rural (5.6%) higher than urban (5.1%).

Hypertension risk in Indonesia is high, lifestyle changes cause an increase in prevalence. Hypertension, dietary patterns and exercise habits can stabilize blood pressure. Because they do not avoid and do not know about hypertension risk factors, so they tend to become severe hypertension, as many as 50% of adults who suffer from hypertension are unaware of hypertensive patients.

Factors that influence the occurrence of hypertension are divided into two major groups, namely factors that cannot be changed such as gender, age, genetic and factors that can be changed such as diet, exercise habits and others. For the occurrence of hypertension need the role of these risk factors together (common underlying risk factor), in other words, one risk factor alone is not enough to cause the onset of hypertension.

In Maluku Province based on data that can be obtained from Maluku Provincial Health Office the prevalence of hypertension according to the results of the Maluku Riskesda in 2013 was 24.3%. Based on data from the Integrated Non-Communicable Disease Development Post (Posbindu PTM) and the annual Health Efforts and Cross-Regional Office section The health of Ambon Port in 2017 has been carried out Screening on 1101 workers in the Yos Sudarso Port Port Area of Ambon, where the results of examination of 550 people experienced hypertension with a prevalence of 35.8%. Various efforts have been made to reduce the prevalence of hypertension by conducting germination activities and screening PTM (hypertension) in the port work area but the prevalence is still high.

Although prevalence is known but the prevalence distribution according to people, place and time is unknown. So the purpose of this study was to describe the prevalence and distribution of hypertension events according to people, place and time in the work area of the Ambon Port Health Office.

OBJECTIVE

This study aimed to describe the prevalence and distribution of hypertension events according to people, place and time in the work area of the Ambon Port Health Office.

METHODS

This research is descriptive observational research with case study research design. The population in this study were all hypertensive patients who were recorded at the Ambon Port Health Office clinic totaling 135 people. The sample from this study is the whole of the population. Variables studied included age, sex, family history, smoking status, status drinking alcohol and obesity. Data analysis was univariate and bivariate analysis. Univariate was conducted to describe the characteristics of respondents including education level, type of work, area of residence and marital status. While bivariate to describe the variables studied in relation to hypertension and presented in table form to determine the proportion of characteristics of each of these risk factors.

RESULTS

General description of the Port Health Office (KKP)

The Class II Ambon Port Health Office (KKP) as a Technical Implementation Unit (UPT) from the Ministry of Health which is under and responsible to the Director General of Disease Control and Environmental Health (Dirjen PP and PL) in accordance with Permenkes RI No.356 / MENKES / PER / 2008 dated April 14, 2008 concerning the Organization and Work Procedure of the Port Health Office.

The Ambon Port Health Office has the main task of carrying out prevention of the entry and discharge of infectious and potential outbreaks of disease, limited health services in the work area of the Port / Airport and crossing the west as well as controlling environmental health impacts based on legislation and applicable provisions.

In carrying out this task, it is explained through the roles and functions that must be carried out in the implementation of various programs / activities by not disturbing the smooth flow of international / national traffic both for people, goods and equipment. Although it was realized that the development of international / national traffic had the effect of changing the pattern of the spread of good diseases due to the emergence of *New Emerging Diseases* and *RE-Emerging Diseases* in the context of the *Public Health of International Concern* (PHEIC).

Description of Hypertension Patients

Univariate Analysis

Table 1. Characteristics of respondents with hypertension at the Port Health Office in Ambon In 2016

No.	Variable	Category	Frequency (n = 135)	Percentage (%)
1	Level of education	No / Not School	17	12,6
		Elementary school	41	30,4
		Junior high school	35	25,9
		High school	24	17,8
		Diploma / Academy	7	5,2
		Bachelor	11	8,1
2	Job type	Civil servants	21	15,5

		Private employees	16	11,8
		entrepreneur	19	14,1
		Retired	11	8,2
		Housewife (IRT)	8	5,9
		Student / Student	5	3,7
		Buru / port workers	46	34,1
		Does not work	9	6,7
3	Residential Area / District	Nusaniwe District	32	23,7
		Sirimau District	47	34,8
		Teluk Ambon	27	20,0
		District	17	12,6
		Teluk Ambon	12	8,9
		Baguala District		
		South Leitimur District		
4	Marital status	Married	94	69,6
		Single	41	30,4

Table 1 shows that the highest level of education is SD at 30.4%. Based on the type of work shows the highest, namely rush / port workers by 34.1 %. Based on the height of the area, the highest is in the sub-district of Sirimau, which is 34.8%. Meanwhile, according to the marital status of the respondents, the highest was married at 69.6 %.

Bivariate Analysis

Table 2. An overview of the risk factors of each variable with hypertension in the Ambon Port Health Office in 2016

No	Variable	Category	Frequency (n = 135)	Percentage (%)
1	Age	≥ 50	55	40,7
		41-50	28	20,7
		31 - 40	35	28,1
		≤ 30 years	17	12,6
2	Gender	Man	72	53,3
		Women	63	46,7
3	Family history	There is a history	79	54,5
		There is no history	56	41,5
4	Smoking status	Smoke	84	62,2
		Do not smoke	51	37,8
5	Drinking Alcohol Consumption Status	Drink alcohol	71	52,6
		Don't drink alcohol	64	47,4
6	Status of Obesity	Obesity (BMI ≥ 25)	70	51,9
		No Obesity (BMI <25)	65	48,1

Table 2 shows that hypertension is most prevalent in the age group > 50 years as much as 40.7%, the majority of patients with hypertension are male sex by 53.3%. Whereas according to the family history of the highest disease that is those who have a history of hypertension which is equal to 54.5%. Based on smoking status and consumption of alcoholic beverages, the majority of hypertension sufferers were smokers at 62.2% and consumption of alcoholic beverages at 52.6%. While based on obesity status, some patients with obesity hypertension (BMI \geq 25) amounted to 51.9%.

DISCUSSION

Age

Most of the highest hypertension sufferers are > 50 years old. High hypertension is in line with increasing age, caused by structural changes in large blood vessels, so that the lumen becomes narrower and blood vessel walls become more rigid (increased peripheral resistance), then an increase in systolic blood pressure. This research is in line with the results of a study conducted by Aris Sugiharto, where 56-65 years of age had a risk of 4.76 times greater hypertension when compared to 25-35 years old. The incidence of hypertension is increasing with age. Arteries will lose elasticity or flexibility so that the blood vessels will gradually shrink and become stiff. In addition, in the elderly the sensitivity of blood pressure regulators, baroreceptor reflexes, began to decrease. This results in blood pressure increasing with age.

Gender

Most people with hypertension are male. Some experts still have different conclusions about this. When a comparison between women and men is reviewed, it turns out that there are quite varied figures. From Sugiri's report in Central Java, the prevalence rate was 6.0% for men and 11.6% for women. The prevalence in West Sumatra is 18.6% of men and 7.4% of women, while urban areas in Jakarta (Petukangan) have 14.6% of men and 13.7% of women. Other experts say men suffer from hypertension more than women with a ratio of around 2.29 mmHg for increased systolic blood. This happens because women are affected by several hormones including the hormone estrogen which increases levels of High Density Lipoprotein (HDL), thus protecting women from hypertension and its complications including thickening of the vessel walls or atherosclerosis.

Family history

Most hypertension sufferers have family sickness. This is due to genetic factors in certain families will cause the family has a risk of suffering from hypertension. A history of family hypertension is related to a decrease in genes from parents to children. The existence of genetic factors in certain families will cause the family has a risk of suffering from hypertension. This is related to an increase in intracellular sodium levels and a low ratio between potassium to sodium. Later it will affect the stretching of blood vessels, then it will increase cardiac output and potentially increase blood pressure. This is in line with the results of this study in line with the results of Julia Hippisley-Cox et al's research, which states that family history with hypertension provides a risk of 3.38 times the incidence of hypertension. According to Sheps, hypertension tends to be a hereditary disease. If one of our parents has hypertension, then throughout our lives we have 25% chance of getting it too. If both of our parents have hypertension, our chances of getting the disease are 60%.

Smoking status.

Most people with hypertension have smoker status. Cigarettes are also associated with hypertension. The relationship between cigarettes and increased cardiovascular risk has been

proven. Apart from the length, the biggest risk of smoking depends on the number of cigarettes smoked per day. One more than one pack of cigarettes a day is 2 times more susceptible to hypertension than those who do not smoke. Toxic chemicals, such as nicotine and carbon monoxide which are sucked through cigarettes, which enter the bloodstream can damage the endothelial lining of arteries and result in the process of atherosclerosis and hypertension. This is in accordance with the results of the research by Xianglan Zhang, et al., And Sheps, Sheldon G., which states that smoking is a risk factor for hypertension (OR 1.28 - 1.62).

Drinking Alcohol Consumption Status.

Most people with hypertension have a consumption of alcoholic beverages. Alcohol is also associated with hypertension. Heavy alcohol drinkers tend to be hypertensive even though the mechanism for the onset of hypertension is not yet known.²⁰ People who drink alcohol too often or too much have a higher pressure than individuals who don't drink or drink a little. This is in accordance with the research on hypertension conducted by Malonda (2010) in the elderly in Tomohon City who obtained statistically the results of respondents with alcohol consumption at a risk 2.8 times greater for hypertension than those who did not consume alcohol.

Status of Obesity

Most people with hypertension have obesity status. This is due to obesity in people associated with increased cardiac output without a reduction in Total Peripheral Resistance (TPR), an increase in sympathetic nervous system activity and insulin resistance. Heart rate and Total Peripheral Resistance are factors that influence blood pressure, when one of these factors occurs will cause an increase in blood pressure. In addition, people who have excess fat (hyperlipidemia), have the potential to experience blood clots, so that the supply of oxygen and food substances to organs is disturbed. This narrowing and blockage of fat stimulates the heart to pump blood even more so that it can supply blood to the tissues. As a result, blood pressure increases, hypertension occurs. The results of this study are in line with the opinions of several experts such as Wong-Ho Chow et al. and Liebert Mary Ann who stated that obesity is at risk of causing hypertension by 2 - 6 times compared to non-obese.

CONCLUSION

Based on the results above, it can be concluded that the proportion of hypertension occurs at the age of more than 50 years, most male sexes have a family history of illness, have smoking habits, consume alcoholic drinks and are obese..

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