FACTORS ASSOCIATED WITH THE HYPERTENSION IN YOUNG ADULTHOOD IN PUSKESMAS SIBELA SURAKARTA

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Abstract

Hypertension is a degenerative disease that contributes to high rates of mortality in the world. It is a risk of the following diseases like stroke, heart failure, and other non-communicable diseases which will influence the productivity and quality of people live. The aim of this research was to analyze factors related with hypertension at the young people in Puskesmas Sibela Surakarta.

The research used observational analytic method with case control approach. There 113 patients with hypertension were recruited based on the data from January to September 2014. The purposive sampling was used to determine the proportion of both case and control group for about 42 people respectively. The data was analized by Chi-square test.

The research yielded that there were relationship between food pattern (p=0.028; OR=2.667 ;95% CI=1.099-6.468) with hypertension incident. But there was no relationship between physical activity (p=0.483) and economic status (p=0.450) with incident hypertension in Puskesmas Sibela Surakarta

The health workers in Puskesmas Sibela should have a sustainability controlling for the patients to keep a good food pattern and physical activity within its services.

Keywords: Economic, Food Pattern, Physical Activity

A. Introduction

Non-communicable diseases (NCDs) is a major health problem in developed countries. Based on data from WHO (2013), in 2008 the mortality rate of NCDs in Indonesia reached 647 per 100,000 population. According to the Ministry of Health (2012), in 2008 in Indonesia there were 582,300 men and 481,700 women died because of NCDs. According to data from the Central Java Provincial Health Office (2013), NCDs in Central Java province in 2012 noted to 1,212,167 cases. Based on data from the City Health Office (DKK) Surakarta in 2012-2013 NCDs number reached 198,465 cases.

Hypertension is not an infectious disease, but a degenerative disease which has high prevalence and mortality rate. It also affects a person's quality of life and productivity. Hypertension is also called The Sillent Killer because this disease is hidden initially. It has killed 9.4 million people in the world each year. World Health Organization (WHO) estimates the number of hypertensive patients will increase. In 2025, it is projected to reach around 29% of people in the world will be affected by hypertension (WHO, 2013).

The prevalence of hypertension cases in Central Java increased from 1.87% in 2007 to 2.02% in 2008 and 3.30% in 2009 or it can be said that there 3 per 100 people suffered hypertension. In 2011, there was an increase number of hypertension, from 562,117 to 634 860 cases. In addition, the prevalence of other diseases, such as stroke, also has high rates at 0.03% of hemorogik stroke and 0.09% of non hemorogik stroke. Likewise, prevalence diabetes mellitus increased in 2011 of 0.08%.

The number of hypertension cases in the last three years (from 2011 to 2013) in Surakarta reached 143,365. There are some health centers

that have a relatively high number of patients with hypertension, namely Puskesmas Sibela (4,014 people) as the highest of cases, Puskesmas Gajahan (3,421 people) and Puskesmas Sangkrah (2,543 people).

Lifestyle is an important risk factor in the onset of hypertension in young adulthood person. It is influenced by an unhealthy lifestyle, such as smoking, lack of physical activity, less nutritious of foods and stress (Nisa, 2012). In Indonesia, the rates of hypertension are still quite high and be a serious problem. Therefore, this study conducted to analyze factors (food pattern, physical activity and economic status) associated with hypertension in young adulthood in Puskesmas Sibela Surakarta.

B. Method

The type of this research was observational with case-control approach. This study analized the relation between physical activity, food pattern, economic status factors and incidence of hypertension retrospectively (Notoatmodjo, 2010). This research was conducted on August 2015 in Puskesmas Sibela Surakarta.

The population in this study were all outpatients (age 20-40 years) with hypertension in Puskesmas Sibela Surakarta during January to September 2014 amounted by 113 people. The sample was counted by 42 respondents in each case and control group, thus 84 respondents in total. The sample will be taken by simple random sampling technique for the case group. While the control group was taken from the nearest neighbour of the case group houses. Inclusion criteria is only applicable for the control group, which are:

1. Do not suffer from hypertension based on medical records at Puskesmas Sibela or other health centers.
2. Aged between 20-40 years.
3. Residing in coverage of Puskesmas Sibela Surakarta area.
4. Willing to be a research respondent till the end.

The analysis of the data used univariate and bivariate analyzes. Univariate analysis is used to perform frequency distribution of each variables in percentage include the mean, median, standard deviation, minimum and maximum values. It will be interpreted by tables or graphs. Bivariate analysis is used to determine the relationship between each independent variables (food pattern, physical activity and economic status) with the dependent variable (incidence of hypertension) which was identified by Chi-Square Test. Data was analyzed by using computer software with a significant level $\alpha = 0.05$ (95% confidence level).

C. Result and discussion

1. The correlation between food pattern with hypertension

There was a relationship between food pattern and the incidence of hypertension in adults in Puskesmas Sibela Surakarta ($p= 0.028 <0.05$). It can be seen with a good food pattern in the control group respondents more than the control group, while respondents with a poor food pattern is more prevalent in the case group. The estimated value of dietary risk factors with a reduction in blood pressure was obtained OR of 2.667 (95% CI = 1.099 to 6.468), so it can be interpreted that a person who has a poor food pattern will have 3 times of the risk for hypertension. In the case group, it was known to have a high propensity to consume salted fish, preserved foods, instant noodles, the use of flavorings and did not read the nutritional content label on packaged foods. Whereas the control group had a high propensity to consume salty foods, eating vegetables and fruit consumption of bananas.

Sodium has a relationship with the onset of hypertension. The greater amount of sodium in the body, there will be an increase in plasma volume, cardiac output, and blood pressure. However, a person's response to the levels of sodium in the body varies (Kartikasari, 2012). Some evidence of epidemiological studies had described the relationship between potassium intake with blood pressure, and a direct relationship between the ratio of sodium / potassium in the urine with blood pressure, increased consumption of potassium associated with natriuretic effect and the possible effects of

dierutik. Reduction in consumption of potassium increase calcium loss in the urine, which is an important cation that regulates blood pressure. At this situation can accelerate the loss of calcium stimulation of parathyroid hormone, which can contribute to an increase in blood pressure. Increasing concentrations of potassium in the body can reduce the production of free radicals in cells endhotel, which can help keep blood pressure (Corwin, 2009).

Dietary pattern in adult life specifically had relation with chronic disease risk factors, including blood pressure (McNaughton & Mishra, 2007)

2. The correlation between physical activity with hypertension

There was no relationship between physical activity with the incidence of hypertension in young adults in the region Puskesmas Sibela Surakarta (p = 0.483> 0.05). Prabaningrum (2014) revealed that physical activity was not associated with blood pressure (p = 0.794> 0.05. In addition, some studies showed that exercise was less effective than diet to reduce blood pressure or there was no correlation between physical activity and hypertension (Stefani, 2012; Fagard, 1999).

The absence of a relationship between physical activity with hypertension can be seen from the results of the univariate analysis the frequency distribution of physical activity, where most respondents already have high physical activity both in the case group and the control group. High levels of physical activity or physical exercise that is regularly associated with reduced mortality and risk of death from cardiovascular disease. High physical activity can prevent or delay the onset of high blood pressure and lower blood pressure in hypertensive patients (Gibney, 2009).

Through regular exercise (aerobic physical activity for 30-45 minutes / day) can reduce peripheral resistance which would prevent hypertension (Sihombing, 2010). An evidence based analyzed by the American College of Sports Medicine indicates that an isolated exercise session (acute effect) lowers BP an average of 5-7 mmHg (Baster, 2005).

3. The correlation between economic status with hypertension

There was no correlation between the economic status with hypertension in young adults in the Puskesmas Sibela Surakarta (p=0.450>0.05). It can be seen from the frequency distribution of economic status, where most respondents already have a high economic status both in the case group and the control group. This means that people who have high economic status and low economic status have the same risk for affecting by hypertension (Sulistiyowati, 2010). Some researchers said the same that income did not influence the high blood pressure (Wahid Saeed et al., 1996), and specifically among women (Hoang et al, 2007).

D. Conclusion

Hypertension can suffer to younger people because of the change of lifestyle, including food pattern. There was positive correlation between food pattern with the hypertension disease. It should have been addressed by people during determine a good diet everyday. Eventhough, the study resulted there was no relation between physical activity, but a good exercise should be done regularly. Health workers also should take an action actively to promote a good lifestyle, especially for patients with hypertension, in order to avoid the worse diseases which can be come up.

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