

Analysis Of Heart Decrease In Hypertension Patients With Karotis Artery Massage

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ABSTRACT

Hypertension is a disease that causes a high morbidity rate. The purpose of this study was to analyze the decrease in heart rate of hypertensive patients before and after doing massage on the carotid artery at the Bontobangun Public Health Center. design with population and sample that is all hypertension patients in Public Health Center of Bonto Public Health Center as many as 30 people. The sampling technique used was accidentally sampling. The results of this study were in the pre-test there were 17 people (56.7%) who were in the category of moderate heart rate, 13 people (43.3%) high heart rate, in the post-test there were 25 people (83.3%) who had moderate heart rate , and 5 people (16.7%) had high heart rates. The conclusion of this study is that there is a decrease in heart rate of hypertension patients after carotid artery massage in public polyclinic public clinics at Bonto Wake with a value of $p = 0.008 < \alpha = 0.05$. suggestions from this study are so that the results of this study can add a reference regarding carotid artery massage to decrease heart rate in patients with hypertension in the general poly bontobangun puskesmas.

Keywords: Carotid Artery Massage, Decreased Heart Rate, Hypertension

INTRODUCTION

The prevalence of hypertension or high blood pressure in Indonesia is quite high. In addition, the resulting consequences are a public health problem. Hypertension is one of the risk factors that most influences the incidence of heart and blood vessel disease. Hypertension is often asymptomatic, so it is only realized when it has caused organ disorders such as impaired heart function or stroke and has an effect on the sufferer and is only seen when there are symptoms that are felt by the sufferer.

The largest case of hypertension in the community has not yet been diagnosed. This can be seen from the results of blood pressure measurement at the age of 18 years and over found the prevalence of hypertension in Indonesia amounted to 31.7%, where only 7.2% of the population already knew to have hypertension and only 0.4% of cases taking medication (Schoenthaler et al., 2012). High blood pressure that continues and is not handled properly causes the heart to work harder, until the heart muscle enlarges. Increased heart work causes enlargement that can lead to heart failure (Heart failure).

In addition, high blood pressure also affects coronary arteries in the heart in the form of atherosclerosis plaque that can lead to blockage of blood vessels and produce heart attacks (Cholifah et al., 2019).

To prevent hypertension from causing further complications, appropriate and efficient treatment is needed. According to (Marlia, 2019), hypertension management in general is pharmacological and non-pharmacological. One of the non-pharmacological treatments in curing hypertension is complementary therapies that are natural treatments including herbal therapy, nutrition, progressive relaxation, meditation, laughter therapy, acupuncture, acupressure, aromatherapy, massage back flower remedy, and reflexology (Sustrani et al., 2006). Reflexology is a method of treatment by stimulating various glands, organs, and other body parts.

Reflexology experts believe there are at least 15 zones in the human body that if a part of the body is disturbed, the complaint can be overcome by stimulating (by pressing) other body parts that are in the same zones. Appropriate stimulation or stimulation in the reflex zones cope with stress and tension, making the whole body relax deeply. This therapeutic relaxation has the role of normalizing the functioning of disrupted organs of the body, effectively facilitating the natural healing process, increasing vitality and thoroughly renewing (Kurnianingtyas et al., 2017). One reflexology massage is Carotid Artery Massage, where the benefits of this massage are to reduce heart rate. Carotid Artery Massage is touching a large part of the arterial wall at the point where the common carotid artery is located in the neck. Carotid artery massage is not yet widely known and developed as a nursing action in Indonesia. In addition, there is still little discussion or literature about Carotid Artery Massage in Nursing. even though this massage is very easy to practice and does not cost too much.

MATERIALS AND METHODS

This type of research is a Quasi-Experiment research with a Non-Equivalent Control Group approach or non-randomized control group design that is a study to compare the results of the intervention of the experimental group and the control group by making repeated observations. The population in this study were all hypertensive patients with a total of 30 people. The sampling technique used was purposive sampling, which is the method of taking samples based on certain considerations or objectives. The sample criteria to be investigated are hypertension sufferers with blood pressure systole > 140 mmHg and diastole > 90 mmHg, have not received pharmacological and

nonpharmacological treatment 8 hours before blood pressure is measured, while patients with a history of permanent heart complaints are exclusion criteria in this study. The instruments used in this study were blood pressure measuring devices (tensimeters and stethoscopes), notebooks and nurses' fingers to massage the patient's carotid arteries.

RESULTS

Table 1. Distributed Frequency of Respondents by Age, Gender and Heart Rate Frequency in Public Poly Health Center of Bonto Bagun

Variabel	Mean	Min-Max	95 % CI
Age	59,53	38-72	56,47-62,60
Gender	Frequency		Percentage (%)
Male	17		56,7
Female	13		43,3
Amount	30		100%
Hear Rate	Frequency		Percentage (%)
Medium	17		56,7
Hight	13		43,3
Amount	30		100%

Based on data from Table 1 shows the average age of respondents is 59.53 years with a minimum age of 38 years and a maximum of 72 years. Estimation results are believed that 95% of respondents age 56.47 years to 62.60 years. Table 2 shows that of the 30 respondents studied, 17 (56.7%) were male and 13 female (43.3%) were male. From Table 3 based on the research conducted obtained as many as 17 people (56.7%) moderate heart rate, and 13 people (243.3).

Tabel 2. Effects of Decreased Heart Rate Hypertension Sufferers

Measurment	Pre Test		Post (Test)		P Value
	Frequency		Frequency		
	N	%	N	%	
Middle	17	56,7	25	83,3	0.008
Hight	13	43,3	5	16,7	
Total	30	100	30	100	

DISCUSSION

Based on the results of data analysis, it was concluded that there was a decrease in heart rate in patients with hypertension after massage on the carotid artery with a p value = 0.008 < α = 0.05. According to (Leung et al., 2017), the carotid artery is a carotid chemoreceptor, palpating the carotid artery can stimulate an area in the artery wall that contains nerve endings. This nerve responds to changes in blood pressure and is able to slow the heart rate. The response to this simple procedure often slows the rapid heart rate and provides important diagnostic information for the doctor. The results of this

study are related to research conducted by (Members et al., 2012) that it has long been known that pressure on bifurcation (splitting a tube or vessel into two branches or channels.)

Carotid arteries produce slow reflexes in heart rate and decrease from blood pressure. In patients with syncope especially those aged over 40 years, an abnormal response from carotid artery massage can be seen. Ventricular stopping for 3 minutes or more and a decrease in systolic blood pressure of 50 mmHg or more is said to be abnormal and is known as carotid artery hypersensitivity. In many studies, massage is done in a lying position but some also do in a lying and standing position with an ECG monitor and blood pressure that is constantly attached. After baseline hemodynamic data is obtained, massage in the right carotid artery for 5-10 seconds at the anterior border of the sternocleidomastoid muscle is as high as the cricoid cartilage, if it has not shown results then after 1 to 2 minutes massage is performed on the opposite side. The response to carotid artery massage is generally in the form of cardiac blockage (asystole), vasodepressive (decreased systolic blood pressure) or a combination of both. According to the researchers' assumptions, that carotid massage is needed in people with hypertension to reduce the heart rate. With a decrease in heart rate, hypertension sufferers will experience a reduction in blood pressure.

CONCLUSIONS

A decrease in heart rate in patients with hypertension after massage of the carotid artery at the Public Health Center of the Bonto Bangun Public Health Center with a value of $p = 0.008 < \alpha = 0.05$. So that through this research can get additional information in the first treatment for patients with hypertension, carotid artery massage which is quite easy to do.

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