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APPLICATION OF DEEP BREATH RELAXATION TECHNIQUE TO LOWER HEADACHE IN HYPERTENSION PATIENTS

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ABSTRACT

Hypertension is a persistent blood pressure with systolic pressure above 140 mmHg and diastolic blood pressure above 90 mmHg. Hypertension includes diseases with a fairly high incidence rate. Hypertension in Indonesia itself is a condition often found in primary health services with a high prevalence, which is 31.7%. Non-pharmacological management to lower the scale of hypertensive headaches, one of which uses deep breath relaxation techniques. The purpose of this research is to find out. Application of deep breath relaxation techniques to lower the scale of headache in hypertensive patients in jakenan area. This research uses pre-experimental designs with a one-group pretest-posttest design research, with 2 respondents in Jakenan Region. Based on the results showed after the patient performed routine deep breath relaxation techniques obtained a decrease in the pre-post test scale of headache in hypertension patients. There is an influence of deep breath relaxation techniques to lower the scale of headache in hypertensive patients in jakenan region.

Keyword: deep breath relaxation; headache scale; hypertension

INTRODUCTION

Hypertension is a health hazard worldwide because hypertension is a major risk factor that leads to cardiovascular disease such as heart attack, heart failure, stroke and ischemic heart disease and stroke is the two main causes of death in the world. Hypertension is a disease with a fairly high prevalence rate. Hypertension is defined as an increase in systolic blood pressure of at least 140 mmHg or diastolic pressure of 90 mmHg (A, Sylvia, M, Lorraine, 2015)

Based on data from the World Health Organization (WHO) in 2015, it shows that about 1.13 billion people worldwide have hypertension, meaning that 1 in 3 people in the world are diagnosed with hypertension. The number of people with hypertension continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension, and it will be estimated that each year 9.4 million people die from hypertension, and its complications (Ministry of Health, 2017).). In Indonesia alone, the prevalence of hypertension reaches 31.7% and it is estimated that each year 9.4 million people die from hypertension and its complications. (Yonata & Satria, 2016). Whereas in Pati District, in 2013 there were 13,034 cases of hypertension and continued to increase in 2018 to reach 48,326 cases of hypertension (Pati District Health Office, 2018).

According to the American Heart Association (AHA), Americans aged over 20 years suffering from hypertension have reached up to 74.5 million people, but nearly 90-95% of cases have no known cause. Hypertension is a slient killer where symptoms can vary from person to person and are almost the same as symptoms of other diseases. The symptoms are headache / neck pain, nausea (vertigo), heart palpitations, fatigue, blurred vision, ringing in the ears (tinnus), and nosebleeds (Infodatin, 2013). In general, what is often encountered when someone is suffering from hypertension, signs and symptoms appear, namely the neck feels painful. The nape feels pain or stiffness in the nape muscles due to increased pressure on the walls of blood vessels in the neck area so that blood flow is not smooth, and the end result

of metabolism in the neck area is due to lack of O2 and nutrients. (MOH, 2013) In addition to the neck pain, one of the symptoms of hypertension is headache.

Hypertension is a condition when a person has an increase in blood pressure above normal or an abnormal increase continuously over a period, with a systolic pressure above 140 mmHg and a diastolic pressure above 90 mmHg (Aspiani, 2014). Headache or headache is an important symptom of various organic and functional body disorders. Headache is defined as an unpleasant sensation involving emotions with or without tissue damage as an important symptom of an organ disorder or disease. Some headaches are caused by pain stimuli that come from intracranial or exstrakranial (Ballenger, 2010). According to Syiddatul (2019) Headache occurs due to atherosclorosis which causes spasms in the blood vessels (arteries) and decreased oxygen in the brain. According to WHO, from 50% of hypertension sufferers, it is known that 25% receive treatment and only 12.5% are treated well. Treatment of hypertension sufferers has not been effective because it often recurs and causes dangerous side effects in the long term. If not treated properly, hypertension can cause complications such as disorders of the brain, cardiovascular system, kidneys and eyes. Hypertension can cause stroke, heart attack, heart failure and the main cause of chronic kidney failure (Hikayati et al., 2013). This is what encourages scientists to develop non-pharmacological therapies. Non-pharmacological therapy can be used as a complement to get a better pharmacological treatment effect (anti-hypertensive drugs) (Mulyati et al., 2013). Several studies have shown that non-pharmacological management is a good intervention for any hypertension treatment (Brunner & Suddarth, 2011).

According to Ervan (2013) deep breathing exercise is a form of non-pharmacological therapy, in which the nurse teaches clients how to do deep breaths, slow breathing (maximum inspiration) and how to exhale slowly. In addition to reducing pain intensity, deep breath relaxation techniques can also increase lung ventility and increase oxygenation in the blood. Deep breath relaxation technique is one of the relaxation therapies that can make the body calmer, so that the headache experienced by the patient will decrease or disappear. This is evidenced by the results of research that most of the headaches felt by patients who have undergone deep breath relaxation interventions can reduce pain from moderate pain to mild pain and have significant changes (Mulyadi, 2015) Based on the existing cases and this background, the need Providing good nursing care to hypertensive patients by doing deep breath relaxation techniques so that pain can be reduced, the researchers took the title application of deep breath relaxation to reduce headache in hypertensive patients in the Jakenan area.

METHOD

The design of this case study is to use a pre-experimental research design with a one-group pretest-posttest design. This study was conducted for 1 week, the instrument used was the pain scale observation sheet (NRS) and record patient documentation. Deep breath relaxation is carried out 3 times for 1 week with a time of ± 15-20 minutes, done when feeling the headache. This research was conducted with the following criteria: Inclusion Criteria: (a)People with hypertension who are not seriously ill, (b)Hypertension patients who experience headaches on a scale of <6 (c)Hypertension sufferers who have never experienced deep breath relaxation therapy. (d)Patients with hypertension in the age range of 20-60 years. (e)Hypertension sufferers who are willing to be sampled in this study. Exclusion Criteria: (a)Hypertension sufferers who experience hearing loss, (b)Hypertension sufferers who are

exposed to comorbidities that can be contagious. (c)Hypertension patients who were unwilling or refused to be sampled in this study.

RESULTS AND DISCUSSION

The results of the study were conducted in Pati from July to August 2020. There were 2 respondents in this study who met the inclusion criteria as a sample group, namely Ny. N who is 47 years old, is a Muslim, Mrs. N besides having Hypertension, Mrs. N also has Stroke symptom disease, Mrs. N also works to make bread and the second respondent is Mrs. K, age 60, is Muslim, works as a housewife, has a history of vertigo, approximately 6 years ago.

Table 1.
Results of Application of Deep Breath Relaxation Techniques to Reduce Headache in Hypertension Patients

Date	The Scale of Headaches			
	Mrs. N (47 year)		Mrs. K (60 year)	
	Pre test	Post test	Pre test	Post test
August 16th 2020	5 (moderate)	2 (mild)	4 (moderate)	3 (mild)
August 18th 2020	4 (moderate)	2 (mild)	3 (mild)	2 (mild)
August 20th 2020	3 (mild)	1 (mild)	3 (mild)	1 (mild)

Based on the journals that have been analyzed by the author, the results of the study state that breath relaxation therapy can reduce the scale of headaches in hypertensive patients. Giving deep breath relaxation techniques for ± 15-20 minutes can reduce the scale of headache in hypertensive patients. The reason is stated that giving deep breath relaxation techniques will provide a relaxing effect. So that the relaxing effect given will dilate the blood vessels so that blood flow and oxygen supply becomes smooth and relieve tension due to pain can be reduced.

The results of this study are in line with the research of Fernalia, Wiwik Priyanti, S. Effendi and Dita Amita (2018) in their research on "The Effect of Deep Breath Relaxation on the Scale of Headache Pain in Hypertension Patients in the Work Area of the Puskesmas Sawah Lebar, Bengkulu City". Based on the results of the study, it was explained that all respondents said moderate pain (100%) before the intervention was carried out, whereas after being given the intervention most of the respondents said that the pain was mild (87.80%). The average pain scale before deep breathing relaxation was 4.37 and the average pain scale after deep breathing relaxation was 3.02 and there was an effect of deep breath relaxation on the headache scale in hypertensive patients.

Hypertension is defined by the Joint National Committee on Defection Evalution of High Blood Pressure (JNC), namely blood pressure higher than 140/90 mmHg and classified according to the degree of severity, ranging from normal high blood pressure (BP) to malignant hypertension. Pain is an unpleasant sensory and emotional experience resulting from the actual potential tissue damage.

Headaches suffered by hypertensive patients are caused by decreased blood supply to the brain and increased blood vessel spasm. Deep breathing relaxation is carried out to relax the muscles in blood vessels and dilate blood vessels so that it can increase the intake of oxygen and nutrients to the brain tissue, as evidenced by Luluk Cahyanti (2017) in his research "Management of Deep Breath Relaxation Techniques in Hypertensive Patients to Reduce Pain

in dr. Loekmono Hadi Kudus " The results in this study explain that deep breath relaxation techniques can reduce headaches through a mechanism by relaxing the muscles of the seklet that experience prostaglandin-increasing spasms, causing vasodilation of blood vessels to the brain and increasing blood flow to the brain and flowing to areas that experience spasm and ischemic. Deep breath relaxation techniques are also able to stimulate the body to release endogenous opoid endorphins and encephalins and there is an effect of reducing the headache scale in hypertensive patients after giving deep breath relaxation techniques.

Deep breath relaxation techniques are nursing actions to reduce pain by relaxing muscle tension, however, deep breathing relaxation techniques cannot relieve pain if done once, it must be done regularly until the pain is reduced / gone. Because the onset of pain is influenced by several factors. The results of this study are in accordance with the results of research conducted by Susana Nurtanti (2017) on "The Effect of Deep Breath Relaxation Techniques to Reduce Headaches in Hypertension Patients". Hasil dalam penelitian ini diperoleh kesimpulan bahwa sebagian besar nyeri yang dialami oleh 2 responden adalah nyeri sedang dengan skala 4-6 (nyeri sedang) . Setelah diberikan terapi relaksasi nafas dalam ini turun menjadi 3-4 (nyeri ringan). Dari hasil observasi ada pengaruh dari giving deep breath relaxation technique therapy to reduce pain in patients with hypertension. Deep breath relaxation therapy was given for 2 days when the respondent experienced hypertensive pain. For the reduction of the pain scale of 2 respondents, it varies depending on the level of concentration, relaxation, comfort and calm around the respondent.

CONCLUSION

After conducting a case study and discussion of deep breathing relaxation techniques, the effectiveness of deep breath relaxation for non-pharmacological therapy on the scale of headache in hypertensive patients was obtained. This shows that there is a decrease in the scale of headache in hypertensive patients after being given deep breath relaxation for ± 15-20 minutes.

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