



ANALYSIS OF STUDY OF NURSING CARE WITH NURSING PROBLEMS COMFORT IN CLIENTS (REVIEW OF THE APPLICATION OF FOOT MASSAGE USING CITRONELLA OIL TO REDUCE BLOOD PRESSURE)

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ABSTRACT	Keywords
<p>Hypertension, also known as high blood pressure, is a condition in which a person's blood pressure exceeds normal limits. This condition if not treated properly can lead to complications such as stroke, heart failure, kidney failure, and other diseases. One of the treatments that can minimize the symptoms felt by people with hypertension is foot massage using citronella oil to reduce blood pressure. The purpose of this research to eliminate discomfort in hypertensive patients by applying foot massage using citronella oil. Qualitative research with a case study research design conducted in May 2022 in the working area of KRMT Wongsonegoro Hospital Semarang with a total sample of 3 respondents based on inclusion and exclusion criteria. The application of foot massage therapy using citronella oil was carried out for 3 consecutive days with a frequency of 1 time a day in the inpatient room. The application of foot massage using citronella oil has the effect of reducing systolic blood pressure from 160 mmHg to 136 mmHg and diastolic blood pressure from 90 mmHg to 84 mmHg. The conclusion there was a decrease in systolic and diastolic blood pressure in hypertensive patients after being given foot massage using citronella oil.</p>	<p>Foot massage, citronella oil, blood pressure, hypertension</p>

INTRODUCTION

Hypertension, also known as high blood pressure, is a condition in which a person's blood pressure exceeds normal limits. This condition if not treated properly can lead to complications such as stroke, heart failure, kidney failure, and other diseases. Hypertension is one of the non-communicable diseases which is a health problem in the world today. That's because hypertension does not have specific

symptoms so that the sufferer does not know that he has hypertension. Not a few cases of hypertension were found accidentally during a medical examination with complaints.¹

According to data (World Health Organization, 2015) it shows that around 1.13 billion people in the world suffer from hypertension and it is estimated that by 2025, 1.5 billion people with hypertension suffer from hypertension and as many as 10.44 million people die from hypertension

and its complications.² The prevalence of hypertension in Central Java is increasing as seen from the results of Basic health research which show that in 2018 there were 1,377,356 people suffering from hypertension and in 2019 there were 2,999,412 people aged 15 years suffering from hypertension. Meanwhile, in Semarang Regency, in 2020 there were 34,322 people aged 15 years suffering from hypertension. Meanwhile in Semarang Regency itself, in 2020 there were 34,322 people aged 15 years and at the KRMT Wongsonegoro Hospital in the Internal Medicine Room in 2021 from October to December, namely 81 cases, then 2022 from January to March 92 cases. suffer from hypertension where they have received standard services. This proves that the increasing number of hypertension needs special attention and proper handling.³

In patients with hypertension, the symptoms are not the same. This is because the physiological response of each individual is different. One of the symptoms felt is discomfort which is reflected as a headache or neck pain. The cause of pain felt in patients with hypertension is due to changes in the structure of blood vessels so that there is blockage in the blood vessels, then vasoconstriction occurs and the resistance of cerebral blood vessels increases and results in headaches in hypertension. Several ways can be done in controlling hypertension such as pharmacological and non-pharmacological. Pharmacologists usually have to take drugs every day, causing dependence on drugs as well as the emergence of side effects from drugs such as cough, insomnia, dizziness, weakness, fatigue, nausea, headache.⁴ Treatments that can minimize the symptoms felt by people with hypertension are those stated by DeWitt & P O'Neill (2014), one of which is relaxation therapy. Some that can be applied as therapy in patients with hypertension include relaxation breathing,

walking, foot massage, hypertension exercise and meditation.⁵

Foot massage therapy can increase blood flow. Muscle massage stimulates venous blood flow in the subcutaneous tissue resulting in decreased blood retention in peripheral veins and increased lymph drainage. Another thing that can cause dilation of arteries which increases blood supply to the area being massaged can also increase blood supply and increase the effectiveness of muscle contraction and remove metabolic waste from the muscles, thereby helping to reduce muscle tension, stimulating relaxation and comfort. Massage is a sensory integration technique that affects the activity of the autonomic nervous system. When a person perceives touch as a relaxing stimulus, a relaxation response appears.

Lemongrass oil or citronella oil is one of the original Indonesian essential oils that contains aromatherapy which can lower blood pressure. Its main content is monoterpene alcohol which is linalool and geraniol found in lemongrass oil which has activity as an analgesic, calming and balancing, stimulating, vasodilator and hypotensive effect. The mechanism of the vasodilation effect is that blood flow back to the heart becomes smooth and stimulates parasympathetic nerve activity so that it will ultimately lower blood pressure. The content of aldehydes and esters which have properties that are easily absorbed by water, are hypotensive and can reduce heart rate.⁷ Another alcohol monoterpene content is citronellol and from the aldehyde group, which is a derivative of the alcohol found in lemongrass oil, it has a pharmacological effect as an analgesic, antidepressant, tonic and stimulus.⁸

Massage techniques in certain areas of the body can remove blockages in blood vessels so that the flow of blood and energy in the body returns smoothly. The results of

the study by Fathiya et al. (2018) showed that after a foot massage with citronella oil for 15 minutes, the blood pressure before the intervention was carried out from 4 respondents, namely Mr. J blood pressure 150/98 mmHg, Mr. Y blood pressure 150/96 mmHg, Mrs. N blood pressure 154/100 mmHg and Mrs. S blood pressure 150/90 mmHg After foot massage using lemongrass oil Mr. J with a result of 133/86 mmHg, Mr. Y with a result of 130/86 mmHg, while Mrs. N with the result 135/88, Mrs. S with a result of 132/90 mmHg.⁹ Similar studies Etri Yanti et. Al (2018) showed that the treatment group (foot massage) before the intervention systolic 156 mmHg and diastolic 93 mmHg after being given the intervention systolic 127.50 mmHg and diastolic 76.25 mmHg and blood pressure in the control group (back massage) before being given the systolic intervention. 155.12 mmHg diastolic 99 mmHg after being given intervention systolic 142.50 and 92.50 mmHg diastolic. Giving foot massage to blood pressure in patients with hypertension in the work area of the Andalas Padang Public Health Center in 2018 was more effective with $p = 0.001$ systolic and 0.000 diastolic ($p \leq 0.05$).¹⁰

On this research, foot massage with citronella oil has been studied in different places by different researchers, so that in this study researchers are interested in conducting a similar study with the title "Analysis of nursing care studies with problems with comfort disorders in hypertensive clients (review of the application of foot massage therapy using citronella oil to lower blood pressure)".

METHOD

Design

The approach used in this study was qualitative with a case study research design, namely research on individuals in depth, through interviews, observation and

documentation. This study analyzes data only at the level of description, where researchers take a nursing care approach that includes assessment, determination of diagnosis, assessment nursing intervention determination, implementation to evaluation.

Sample and sampling technique

The population used in this study were all patients with hypertension in the working area of the KRMT Wongsonegoro Hospital, Semarang 2022. The sample used was 3 patients who met the inclusion and exclusion criteria. The focus of the study discussed by the researcher was patients with grade I hypertension (BP: 140-159 mmHg) who had a sense of comfort.

Instruments

In collecting information from respondents, researchers used data collection tools in the form of questionnaire sheets and study documentation containing questions related to patient identity, current medical history, past medical history, family medical history, physical examination and vital signs and supporting examinations if necessary. there is. Then, blood pressure measurements were performed using a manual sphygmomanometer instrument and a stethoscope. Application of foot massage using citronella oil based on SOP (Standard Operating Procedure) for 3 consecutive days with a frequency of 1 time a day. To measure the duration of the intervention, the researcher used mobile stopwatch where the results of the study were recorded in the observation sheet.

Intervention

Primary data was obtained from the results of data collection which was filled out by respondents using the provided questionnaire sheets and interviews. Meanwhile, secondary data was obtained from the results of research which took place in the working area of KRMT Wongsonegoro Hospital, Semarang.

Researchers conducted a study by applying foot massage using citronella oil given to patients with hypertension grade I (TD: 140-159 mmHg) who experience discomfort, either in the form of complaints of pain in the neck or other disorders that cause discomfort to patients due to high blood pressure. The application of foot massage therapy using citronella oil was carried out for 3 consecutive days with a frequency of 1 time a day in the inpatient room.

Data Analysis

Researchers collected data by means of identification, interviews and filling out questionnaires and observation sheets. In collecting data, case studies must be careful, intensive and comprehensive in order to obtain accurate data. The presentation of the data is adjusted to the selected descriptive research design. For case study research, the data is presented in a textual/narrative way and can be accompanied by a snippet of verbal expressions from the research subjects which are the supporting data.

Ethical considerations

In conducting research, it is necessary to obtain recommendations from the institution or other parties by submitting an application for permission to the institution or institution where the research is conducted. When conducting research, researchers need to pay attention to several ethical considerations or aspects, including: anonymity, confidentiality, autonomy, justice and beneficence. The researcher asked the respondent's consent to participate (informed consent) before the research was conducted.

RESULTS

The results of this study can be stated that there is a gap between theory and real cases in patients with impaired sense of comfort either in the form of complaints of pain in the neck or other disorders that cause

discomfort due to high blood pressure in patients with hypertension. To facilitate the discussion, the researcher used a nursing care process approach. The following are the results of applying nursing actions to comfort disorders in clients with grade 1 hypertension will be presented in the table below:

Table 1. The results of applying foot massage with citronella oil

Name	Meeting 1		Meeting 2		Meeting 3	
	Pre (m mH g)	Post (m mH g)	Pre (m mH g)	Post (m mH g)	Pre (m mH g)	Post (m mH g)
Mr. B	158 / 90	154 / 90	150 / 90	148 / 88	150 / 80	146 / 80
Mr. P	157 / 86	143 / 86	140 / 88	138 / 86	140 / 80	136 / 80
Mrs. S	160 / 90	150 / 90	158 / 90	156 / 90	156 / 88	147 / 84

Based on the table above, it shows that each respondent experienced a decrease in blood pressure, either only systolic or diastolic pressure or both at each meeting.

Table 2. Results of blood pressure measurements before and after giving foot massage with citronella oil

Name	Meeting 1 (pre)	Meeting 3 (post)	Difference	
			Systolic	Diastolic
Mr. B	158/90	146/80	12	10
Mr. P	148/86	136/80	12	6
Mrs. S	160/92	147/84	10	13

Based on the table above, the results of each respondent's blood pressure measurement after being given a foot massage with citronella oil (citronella oil) experienced various decreases. Mr. B

experienced a decrease in systolic pressure of 12 mmHg and diastolic pressure of 10 mmHg, Mr. P experienced a decrease in systolic pressure of 12 mmHg and diastolic pressure of 6 mmHg while Mrs. S experienced a decrease in systolic pressure of 10 mmHg and diastolic pressure of 13 mmHg.

DISCUSSION

Assessment

The results of the study on 3 clients which was carried out on 19-21 May 2022, the pharmacological therapy given to the client was the same, namely Amlodipine dose of 10 mg eaten after meals, and in the application of foot massage using citronella oil adjusted to when the researchers practiced in the Sadewa 4 inpatient room, described as follows:

Respondent 1, namely Mr. B is 61 years old, the last education is junior high school/equivalent and works as a private employee, Islam, address is Mranggen, The client does not have any allergies to food or drugs, antihypertensive pharmacological therapy that was received during treatment, namely Amlodipine 10 mg dose which was eaten at 20.00 WIB after eating, Client's main diagnosis (COPD, Hypertension and CHD). Mr. B has a weight of 68 kg and a height of 156 cm. The client said he forgot when he first found out that he was suffering from hypertension, because at that time the client felt dizzy for days and hampered his activities, then the client checked himself into a doctor's clinic facilitated by the company where he worked. During the assessment, the client complains of a feeling of heaviness in the nape of the neck and is often light-headed when changing positions from sitting to standing. The client said he had never been hospitalized and there were family members, namely the client's mother who had a history of hypertension. When

measuring blood pressure, the result is 158/90 mmHg.

Respondent 2, namely Mr. P is 57 years old with an elementary school education/equivalent and does not work. The client has a weight of 76 kg and a TB of 161 cm, religion is Islam, address is pedurangan, does not have any allergies to food or drugs, the main diagnosis (colic abdomen, rheumatoid arthritis, hypertension), antihypertensive pharmacological therapy obtained during treatment, namely Amlodipine dose 10 mg taken at 20.00 WIB after eating. The client said that he first learned that the client had hypertension around 2019, at that time the client felt dizzy and heavy in the neck then the client checked himself at the village health center near his house. During the assessment, the client complained of severe pain in the neck and middle of the head and difficulty sleeping. The client said that he had never been hospitalized and often when he was sick he just caught a cold. The client said the client's mother also suffered from hypertension. When measuring the client's blood pressure, the result is 157/86 mmHg.

Respondent 3, namely Mrs. S is 54 years old with the last education not going to school and working as housewife, Islamic religion, address is klippang, does not have any allergies to food or drugs, main diagnosis (GEDS, hypertension), antihypertensive pharmacological therapy that was obtained while being treated, namely Amlodipine dose 10 mg taken at 20.00 WIB after eating. The client has a weight of 78 kg and a TB of 144 cm. The client said that he first learned that he had high blood pressure when he was hospitalized for typhoid. When the assessment was carried out, the client said that he felt uncomfortable and heavy in the neck and back of the head, besides that the client also complained of feeling dizzy when changing positions. The client said the

client's mother had a history of hypertension. When measuring blood pressure, the result is 160/90 mmHg.

Diagnosis

Based on the studies that have been carried out on the three respondents, the data obtained are that the client complains of discomfort and heaviness in the nape of the neck and in the head and each individual has a family history of hypertension and when the blood pressure measurement is carried out, the number is quite high. Nursing diagnoses that can be formulated are Disturbance in Comfort Associated with High Blood Pressure (D. 0074).

Interventions

Formulation of nursing plans using the basis of SIKI and SLKI in accordance with nursing diagnoses. The purpose of providing nursing actions for 3 days is that the client's comfort status (L. 08064) is expected to increase with the outcome criteria: Feeling relaxed from 2 (decreasing enough) to 4 (increasing enough), complaints of difficulty sleeping from 2 (enough increased) to 4 (enough decreased) and whimpered from 2 (slightly increased) to 4 (slightly decreased). To achieve the expected results according to the results criteria, it can be done through relaxation therapy (I. 09326), namely by giving foot massage with citronella oil.

Implementation

Respondent 1 is the first meeting on Thursday, 19 May 2022 Mr. B was positioned semi-supine with the head and shoulders slightly elevated using a pillow and then massaged the feet with citronella oil (citronella oil). In adults, standard solutions are used. 3% solution: 15-18 drops of essential oil in 1 oz (\pm 30 ml) of carrier oil. When given a foot massage with citronella oil the client said he felt relaxed and felt good. Then after 15 minutes, blood pressure measurements were taken and the results were 154/90 mmHg, where the systolic

pressure decreased while the diastolic pressure remained. The second meeting, which is Friday, May 20, 2022, at 16.00 WIB, was carried out an assessment and the client said he still felt a bit heavy but not like yesterday, then the blood pressure measurement was carried out and the results were 150/90 mmHg. Then the client was given the same treatment as before and blood pressure was measured and the results were 148/88 mmHg. The client said he felt good and wanted to buy the same lemongrass oil tomorrow if there was more sustenance so that his son could do foot massage as he had been taught. The third meeting, which is Saturday, May 21, 2022 at 10.00 WIB, the client was assessed and said he felt better than the previous day. Then blood pressure measurements were made and the results were 150/86 mmHg. Furthermore, the client was given the same treatment as before and blood pressure measurements were made and the results were 146/80 mmHg. The client said he was more relaxed and feeling better.

Respondent 2 is the first meeting on Thursday, 19 May 2022 Mr. P was positioned semi-supine with the head and shoulders slightly elevated using a pillow and then massaged the feet with citronella oil (citronella oil). In adults, standard solutions are used. 3% solution: 15-18 drops of essential oil in 1 oz (\pm 30 ml) of carrier oil. When given a foot massage with citronella oil the client's expression is calm and relaxed. After an interval of 15 minutes, blood pressure measurements were made and the results were 146/86 mmHg. The second meeting on Friday, May 20, 2022 at 17.00 WIB, the client was reassessed and said he felt better and was not dizzy, just a little heavy. Then the client is measured blood pressure obtained results of 140/88 mmHg. Then the client was given the same treatment as the previous day then blood pressure was measured and the results were

138/86 mmHg. The client says it feels good and the dizziness is gone. The heaviness in the neck is getting better. The third meeting on Saturday, May 21, 2022 at 10.30 WIB, the client was assessed and said he felt better than yesterday, the heaviness of the neck was still okay. Then measured blood pressure obtained results of 140/80 mmHg. Then the client was given the same treatment as the day before, then after an interval of 15 minutes the pressure was measured and the results were 136/80 mmHg. The client says he feels better and the heaviness in his neck is getting lighter.

Respondent 3 is the first meeting on Thursday, 19 May 2022 Mrs. S is positioned in semi supine position with the head and shoulders slightly elevated using a pillow, then massage the feet with citronella oil. In adults, the standard solution is used, namely 3% solution: 15-18 drops of essential oil in 1 oz (\pm 30 ml) of carrier oil. The client says relax, the client's expression is calm. After completing the 15-minute interval, blood pressure measurements were taken to obtain the results of 155/90 mmHg. The second meeting on Friday, May 20, 2022 at 19.00 WIB was assessed and the client said he was still a bit dizzy and had difficulty being able to move and needed help from his husband, the result of the blood pressure measurement was 158/90 mmHg. Then the client was given the same treatment as the previous day and blood pressure was measured and the results were 156/90 mmHg. The client said that after being given therapy it felt good and comfortable. The third meeting on Saturday, May 21, 2022 at 13.00 WIB, the client was assessed and said it felt better than yesterday. Then the client was given the same treatment as the previous day and blood pressure measurements were made and the results were 147/84 mmHg. The client said that after being given a foot massage with citronella oil he felt a little lighter and better, the taste was fresh.

Evaluation

Nursing evaluation is carried out after the client is given a foot massage with citronella oil and pharmacological therapy Amlodipine with a dose of 10 mg eaten at 20.00 WIB after eating for 3 consecutive days but the hours of application are adjusted when the researcher practices in the Sadewa inpatient room and obtained the following results:

Respondent 1, namely Mr. B at the first meeting before being given a foot massage with citronella oil his blood pressure was 158/90 mmHg and complained of discomfort in the middle of the head and heaviness in the back of the neck and sometimes felt dizzy when used to change positions. Then at the third meeting after being given rose aroma therapy the client's blood pressure was 146/80 mmHg and said he felt more relaxed and felt better.

Respondent 2, namely Mr. P at the first meeting before being given a foot massage with citronella oil his blood pressure was 152/86 mmHg and complained of heaviness in the neck and middle of the head and found it difficult to sleep. At the third meeting after being given a foot massage with citronella oil, the client's blood pressure was 136/80 mmHg and the client said he felt better and the heaviness in his neck was getting lighter.

Respondent 3, namely Mrs. S at the first meeting before being given a foot massage with citronella oil his blood pressure was 159/92 mmHg and complained of discomfort due to heaviness in the neck and back of the head. At the third meeting after being given a foot massage with citronella oil the client's blood pressure was 150/84 mmHg and felt a little light and comfortable, the taste was fresh.

CONCLUSIONS

Application of foot massage using citronella oil 3% solution: 15-18 drops of essential oil in 1 oz (\pm 30 ml) of carrier oil with a duration of 15 minutes for each massage where there is an emphasis for 15 seconds on each reflex point in the range for 3 days in hypertensive patients who received pharmacological therapy Amlodipine 10 mg taken at 20.00 WIB after meals, had the effect of reducing systolic blood pressure from 160 to 136 mmHg and decreasing diastolic blood pressure from 90 to 84 mmHg.

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