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Application of warm water foot bath therapy for grade two hypertension clients in the context of family

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Abstract

Hypertension is often said to be a silent killer because the disease often does not cause symptoms in those who experience it. This disease not only needs treatment, but family support is needed for prevention and treatment of family members who suffer. Objective: to analyze the application of warm water foot soak therapy in hypertension in lowering blood pressure. Method: the design used is descriptive with case studies, through the process of family nursing. Monitoring of warm water foot soaks was carried out for 3 days, before and after the action blood pressure was measured. Results: there was a decrease in blood pressure after 3 days of action. In family 1, initial blood pressure was 160/90 mmHg, after 3 days of action it decreased to 145/85 mmHg. Family 2 before therapy 150/100 mmHg, decreased to 140/86 mmHg after soaking feet in warm water. The decrease in blood pressure that occurred in both families was more than 10 mm Hg. Conclusion: the application of foot soak therapy using warm water which is carried out for 3 days, is effective in reducing blood pressure in cases of hypertension. Suggestions are recommended for families and subjects to be able to independently apply warm water foot soak therapy, carry out routine blood pressure checks at the nearest health facility. Keywords: Hypertension, Blood pressure, Warm Water Foot Soak

Introduction

Many people with hypertension do not realize that they suffer from the disease, because they do not feel the symptoms of high blood pressure which means that they even underestimate the condition. In recent years, many young people suffer from hypertension due to unhealthy lifestyles and lifestyles. Paskariatne Probo, a hypertension expert in 2019 said the factors causing hypertension were due to an inappropriate lifestyle carried out by today's young people. The lifestyle is a lifestyle that lacks physical activity or sports, the habit of consuming fast food, and smoking, easily stressed, likes being impatient.

This can increase the causes of hypertension. Cardiovascular disease is the most important health problem in both developed and developing countries (Kemenkes RI, 2019). Cut Putri revealed in the East Java Government Official Gazette that Hypertension is not only in Indonesia but also in the world, because is risk factor for other health such as heart, kidney problems, diabetes, and stroke (Berita resmi Pemkot Jaktim, 2019). According to the P2PTM of the Indonesian Ministry of Health in 2018 stated hypertension as a silent killer because hypertension occurs without any symptoms, and people who suffer from it do not realize that they are suffering from the disease.

The World Health Organization in 2015 stated that there were 1.13 billion people in the world suffering from hypertension. Southeast Asia is the country with the highest position of suffering from hypertension with 161,761,250 people (P2PTM, 2019). The prevalence of hypertension in DKI Jakarta shows 27,195 people (Risikedas, 2018).

The Indonesian government's efforts to overcome hypertension are by improving first-level health services by optimizing the responsibility¹³ system of health care centers or referrals, improving health service facilities. The P2PTM of the Ministry of Health of the Republic of Indonesia in 2019 held the PATUH program containing routine health checks and following doctor's directions, overcoming diseases using appropriate and obedient treatment methods, following a diet and paying attention to balanced nutrition, seeking exercise or physical activity according to ability safely, without smoke and avoid cigarette smoke, and do not consume alcohol.

In addition to the PATUH program, the¹⁶ Prevention and Control of Non-Communicable Diseases carries out the CERDIK program, the program contains routine health checks, not smoking and avoiding cigarette smoke, diligent exercise or physical activity, controlling diet or a balanced diet, adequate sleep and rest, avoid stress.

Hypertension should not be ignored and must be treated properly, if not treated immediately can lead to several complications. According to the Indonesian Ministry of Health in 2020, if hypertension is not immediately treated and monitored, it can cause complications such as stroke, coronary heart disease, kidney failure, and damage to vision. Therefore, hypertension should not be underestimated and must be handled properly so that dangerous complications do not occur. Ashri & Tini in 2016 stated that the economic responsibility borne by people with hypertension can result in economic disturbances, either indirectly affecting the welfare of life in the family, regionally or nationally.

In addition to the role of nurses, family support is also very necessary to prevent and treat family members who suffer from hypertension (Berita Satu, 2017). According to the Ministry of Health in 2017, the family function is central to the approach to implementing a healthy program for Indonesia. Friedman states that there are five functions in the family. The health care function is the most important function to be able to resolve things that are not good regarding health in the family. Because to maintain a healthy state in family members.

Sri Wahyuni in 2018 in Jember Regency stated that family support is important in hypertension management, showing that most families have good encouragement or assistance to help families who suffer from hypertension. such as taking care of families who are depressed and afraid because of hypertension that is being experienced, assisting family members in implementing non-pharmacological management of hypertension, namely diet, families can rearrange to monitor the picture in the family to help manage high blood pressure in families suffering from the disease. Treating hypertension can be done with non-pharmacological treatments, one of which is warm water foot bath therapy.

In addition to efforts from the government to overcome complications, the importance of the role of nurses in the family. According to Friedman, the Ministry of Health in 2017 states that the function and role of nurses in the family is as actors to provide care or assistance in care by using a nursing process approach, nurses as teachers or nurse educators provide knowledge and health education for families, as counselors are nurses who are able to provide guidance to families. In dealing with and caring for sick families, nurses are able to empower families using new and beneficial knowledge for the family.

Warm water foot bath therapy is one of the techniques¹⁵ of hydrotherapy. Hydrotherapy itself is divided into 3, namely bathing, compressing or soaking the¹⁹ feet with warm water, this technique has been known since the Greek era²⁰ can reduce high blood pressure for people with hypertension. The benefits of soaking the feet using warm water are that it can improve blood circulation, development or enlargement of blood vessels, and trigger the nerves of the soles of the feet (Ivena, 2021). Nerves located on the soles of the feet and can³ to other bodies such as the heart, kidneys, lungs, stomach, and pancreas (Hembing, 2000). Warm water foot bath therapy can have a therapeutic effect.

Based on the results of research by Agus Pryanti, Mulia Mayangsari and Nurhayati in 2020, researchers found differences in blood pressure after warm water foot bath therapy was carried out. Supported by research conducted by Siti Utami Dewi, Putri Ayu Rahmawati in 2019 found a decrease in blood pressure of 10 mmHg after warm water foot soak therapy. It is also supported by research conducted by Sella, Erwin and Riri in 2018 that warm water foot soak therapy is more effective in lowering blood pressure in someone who suffers from hypertension. The treatment plan for the warm water foot bath modality was carried out on both clients with hypertension with hypertension degree 2 and did not consume antihypertensive drugs. The warm water foot soak is carried out for 3 days which is carried out in the afternoon. Satoshi stated in the 2019 Healthy Editor, that blood pressure tends to increase in the morning. In addition, the warm water foot soak therapy is effective in the afternoon, and the client tends to have completed their activities or has finished their work in the afternoon.

10 Method

The research was conducted using the case study method. This case study used two participants who had hypertension grade 2. The inclusion criteria were both female subjects, aged 49-60 years, systolic blood pressure > 140 mmHg, diastolic blood pressure > 90 mmHg, the client did not know about warm water foot bath therapy, does not have disease complications, and does not take anti-hypertensive drugs. Before the action was taken, both participants were given an explanation of the reasons, the purpose of nursing care, especially the application of the warm water foot soak. After being given an explanation, both participants were given an informed consent form to be signed as evidence of the participants' willingness.

Results

Table 1. Blood Pressure (mmHg) Monitoring Against Warm Water Foot Soak.

Subject	17 Day 1		Day 2		Day 3		explanation
	Pre	Post	Pre	Post	Pre	Post	
Subject 1	160/90	158/88	155/90	150/88	150/88	145/85	Decrease in blood pressure for 3 three days
Subject 2	150/100	150/100	150/90	145/90	145/90	140/86	The second subject did not experience a significant decrease in blood pressure, this is because when the foot soak therapy was carried out with warm water, they communicated and the condition was not relaxed.

Graph one depicts the condition of the first subject's blood pressure before and after the action for three days (Figure 1).

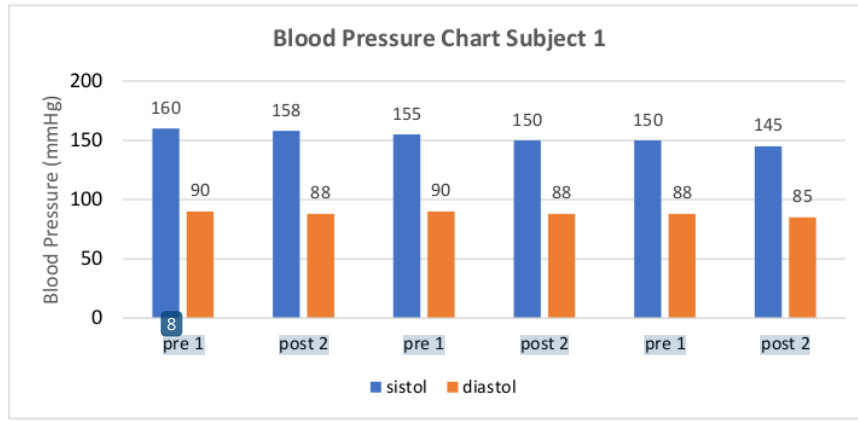


Figure 1. Blood Pressure Chart Subject 1.

An overview of the results of blood pressure measurements on the second subject for 3 days of warm water foot soaking (Figure 2).

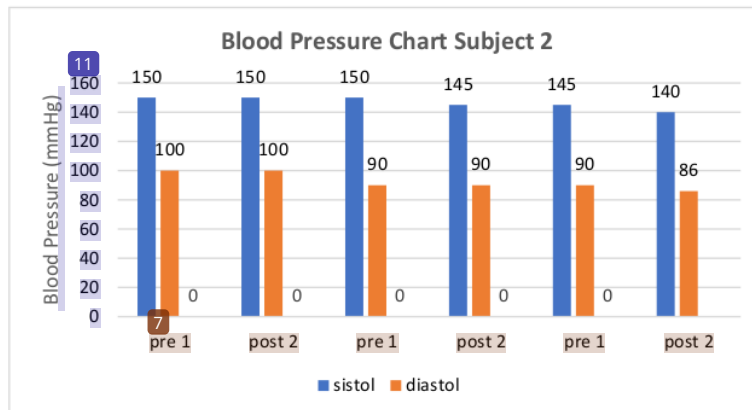


Figure 2. Blood Pressure Chart Subject 2.

Discussion

The cause of the first family hypertension is due to an unhealthy diet and likes to eat foods high in salt, because salty foods contain (Na), which binds a lot of water, the higher the sodium can cause the blood volume to increase, the occurrence of hypertension according to Laura and Imanuel in 2020. The cause of hypertension in family 2 is because his father has a history of hypertension, and he does not maintain his diet, sometimes he still consumes salty food. This is in accordance with the theory (Muhamad Ridwan, 2017: p. 13).

There are differences in the two families, the second family of mother L has difficulty sleeping at night, while the first family has no problems. This can happen because **poor sleep patterns can cause a person's physiological and psychological balance disorders** to be disturbed. Lack of sleep causes structural adaptations in the cardiovascular system, and this makes blood pressure high (Martini, Rhoshifanni and Marzella, 2018)

The author found differences in the two families, in family one almost never did routine checks for blood pressure checks carried out by the Cawang Health Center. This can have an effect because by routinely checking blood pressure, knowing the condition of blood pressure, the family can handle the problem either with drugs or not using drugs, so that the problem of hypertension can be handled by the family by doing regular blood pressure checks. Subject 1 has been advised to follow the prolanis with the local RT but is lazy, it can mean that family 1 does not carry out government programs to overcome hypertension (Ministry of Health, 2019).

In families one and two there are gaps, family one does not maximize family functions according to Friedman, namely health care, where the child and her husband do not remind Subject 1 to reduce salty foods, and persuade her mother to take medicine and do regular blood pressure checks because family members consider the disease subject 1 is not severe. One family does not carry out the health care function properly.

The author assesses the nursing actions that have been determined, whether the actions given to the family are optimally successful or not. There was a difference in the two families after the **warm water foot, there was no decrease in blood pressure** in subject 2. Because subject 2 condition when the therapy was carried out, her condition was not relaxed and talked a lot to the author. This is in line with the journal compiled by Agus, Mulia. and Nurhayati in 2020 when doing **warm water foot soak therapy** will be more **effective in** combination with deep breathing relaxation, because relaxation techniques will make the body experience a decrease in emotional stimulation and reduce stress, so the body becomes more relaxed and comfortable.

This proves that when the foot soak therapy is carried out with warm water in a relaxed and comfortable state, it will be more effective in lowering blood pressure.

Based on the actions that have been taken to both families for three days there is a decrease in blood pressure in the family. In the first family there was a decrease in blood pressure from 160/90 mmHg to 145/85 mmHg. In the second family there was a decrease in blood pressure after 3 days of warm water foot bath therapy, a change from 150/100 mmHg to 140/86 mmHg. This is in line with research conducted by Agus, Mulia and Nurhayati in 2020 which showed changes in blood pressure before and after warm water foot bath therapy, the average value obtained by pretest systole was 145.33 and posttest average value was 128.67, for the average pretest diastolic value of 94.00 and posttest value of 82.00. Supported by research conducted by Dewi and Rahmawati 2019, the average difference in blood pressure reduction is 10 mmHg after the warm water foot.

Conclusion

Decrease in blood pressure can occur because there is support from various factors. One of the main factors is the role of family support, the function of the family, namely the function of health care is fulfilled. Family support in carrying out treatments such as a hypertension diet, and when using warm water foot bath therapy requires a relaxed and comfortable condition, which is more effective in lowering blood pressure.

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