



Giving Of Non-Pharmacological Therapy Of Young Coconut Water (Cocos Nucifera L.) To Hypertension Patients

Dedi Supriadi¹, Elis Roslianti¹, Rizky Perdana Susanto¹
¹STIKes Muhammadiyah Ciamis, Ciamis, Indonesia

Correspondence author: Rizky Perdana Susanto

Email: rizkykrqt@gmail.com

address : STIKes Muhammadiyah Ciamis, Jl. KH. Ahmad Dahlan No. 20 Ciamis, Ciamis, West Java 46216 Indonesia, Telp.082324230130

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ABSTRACT

Hypertension is a condition in which systolic blood pressure is elevated, more than 140 mmHg, and diastolic blood pressure is over 90 mmHg. This disease is also called the “*Silent Killer*” because it has no distinctive symptoms. Non-pharmacological therapy is a therapy that utilizes natural ingredients. Young coconut water is a non-pharmacological treatment for high blood pressure. Young coconut water contains almost all minerals and potassium (K) is one of the most abundant ingredients in coconut water. Young coconut water is high in potassium, which helps lower blood pressure. So that young coconut water can be used to treat high blood pressure. The methods used are descriptive and based on a case study approach. The case study was based on a family with high blood pressure problems with ineffective health management. Client and family data collection techniques include the stages of assessment, interviews, observation, physical examination, and also documentation research. The results of the case study when the client's assessment was carried out complained of inflammation, dizziness, throbbing headaches, to neck stiffness. When checking the client's imperative signs, the client's blood pressure was 170/110 mmHg. Families don't seem to understand how to care for family members with hypertension, families also don't seem to take advantage of existing health facilities. The established diagnosis is that family health management is not effective. The nursing plan used is non-pharmacological therapy of young coconut water for 3-day visits to reduce the high blood pressure of clients with hypertension. After implementing the action of giving young coconut water (*cocos nucifera*) to lower blood pressure in clients with hypertension, It has been found that young coconut water can lower blood pressure, but drinking coconut water was limited by the short study period of 3 days, so the client's blood pressure was always in the normal range 150/90 mmHg is classified as mild hypertension.

Keywords: Blood pressure. Coconut water, Hypertension.

Introduction

Hypertension, also known as high blood pressure, is a condition in which the systolic blood pressure exceeds 140 mmHg, and diastolic blood pressure is above 90 mmHg. This disease is also known as the “*silent killer*” because it has no specific symptoms. Many people experience symptoms of high blood pressure without realizing it because the person feels healthy so the general majority of cases of high blood pressure in society have not been diagnosed (S.P. Rahayu et al., 2021). Hypertension has several factors including major or predisposing factors, namely the causes of hypertension, but it is still not known with certainty the risk factors that increase the tendency to develop a person's blood pressure disease, including gender, age, ethnicity, genetics, stress, environmental factors, the habit of consuming too much salt, smoking, obesity and others (Fransisca, 2022).

Hypertension is a degenerative disease such as diabetes mellitus which can affect anyone, both old and young people, and is also included in the group of non-communicable diseases, but remains a global problem. *The World Health Organization* (WHO) predicts that the rate of hypertension will continue to increase in line with the growth of the human population in the coming 2025, it is estimated that 29% of the global population will suffer from hypertension (Roza et al., 2020).

According to WHO (*World Health Organization*), the proportion in developing countries reaches (40%) while in developed countries it is around (35%). The African region ranks first for hypertension patients (40%), the Americas (35%), and in Asia around 1.5 million people die from this disease each year. This shows that there is one in three people infected with hypertension. The prevalence of the Indonesian state is quite high, namely 32% of the total population (Lestari & Nugroho, 2019). And the elderly have the highest prevalence according to the Indonesian Ministry of Health, namely data on hypertension (57.6%) at the age of 65 years, ages 55-64 years (45.9%) and, (74-63, 8%) ages over 75 years old (Kurniasari & Purnadianti, 2020).

According to Riskesdas data (2018), it was found that the prevalence of hypertension in Indonesia after being examined at the age of 18 years and over had a prevalence of around (34.1%), among the ages of 25 to 34 years (20.1%) with this percentage being female (36.9%) higher in men (31.3%) (Jasmine et al., 2022). The results of Riskesdas (2018) also report that in Indonesian there are diseases that primarily affect the elderly, namely hypertension 55.2% in West Java which is the highest compared to the prevalence of hypertension in the special regional area of Jakarta (35.24%)(Kemenkes, 2021). According to a report from the Ciamis District Health Office, the number of people with high blood pressure among the elderly is increasing every year, in the 2019 there were 2,191 people, and in 2020 there were 20,083 people (Wulandari, 2020). The Ciamis area has the most hypertension in 2022 according to the UPTD Cikoneng Health Center number 3 cases reached 656 (Wulandari, 2020) The Ciamis area has the most hypertension in 2022 according to the UPTD Cikoneng Health Center number 3 cases reached 656 (Firmansyah & Sherina, 2022).

According to Chayote et al., (2023), Treatment of hypertension is a cholesterol-lowering diet or a high-fiber, low-calorie diet for hypertensive patients with concomitant obesity. People with hypertension should eat more fruits, vegetables, and low-fat foods to lower their blood pressure. Healthier lifestyle changes such as a calorie diet if you are obese, limiting alcohol intake, engaging in regular physical activity, reducing salt intake, maintaining an adequate intake of sodium, calcium, and magnesium, and stopping smoking.

Proper treatment is needed to control hypertension. There are types of treatment for high blood pressure: pharmacological (drugs) and *non-pharmacological* (non-drug)

techniques. Pharmacological treatment is a therapy that comes from chemical substances that are consumed in the long term will have a bad impact, and will also cost a lot of money. Some of the side effects are headache, shortness of breath, (edema) of the hands and feet, abdominal pain, drowsiness, dizziness. , and the heart beats faster (palpitations)(Petrika et al., 2019)

Non-pharmacological therapy is defined as utilizing natural ingredients without using chemical drugs. One of them is young coconut water which is a natural ingredient therapy to reduce pressure. The effect of drinking coconut water has many benefits, apart from being affordable and easy to find on the side of the road. There are lots of ingredients in coconut water, including the mineral substance potassium (K), which is one of the most abundant ingredients in young coconut water (Kaaba et al., 2019).

In the research results of Kaaba et al., (2019) giving of coconut water was given as much as 250 ml over a period of 5 days by being given 2 times a day to people aged 60 years to 79 years Significant with a percentage (0.005) change in blood pressure: Systolic decreased an average of ± 34 mm Hg, diastolic decreased an average of ± 2 mm Hg so that it can be concluded that the content of coconut water can be an alternative used to increase potassium to balance sodium levels to control blood pressure. In coconut water there is a potassium content of 290 mg/100 ml, so it can be used as a therapy for controlling blood pressure in hypertension.

Similar to the results of Roza et al., (2020) the amount of coconut water given as much as 350 cc over 7 days showed a decrease in systolic by 9 mmHg and 5 mmHg in diastolic, the magnesium content in coconut water has benefits as an antioxidant in preventing hypertension by regenerating damage in blood vessels due to oxidative stress and reduce blood vessel damage.

Based on the review above, the author is very interested in researching young coconut water which aims to determine the effectiveness of the content of young coconut water (*Cocos Nucifera*) to reduce high blood pressure which was conducted on May 31 2023 to June 3 2023 in Colendra Hamlet, RT. 013 RW. 05, Sindangsari Village, Cikoneng District, Ciamis Regency. On the client Mrs. O, 73 years old, and a family with cardiovascular system disorders: Hypertension who often complains of high blood pressure so that sometimes he feels dizzy, and headaches are felt to spread to the neck/neck stiffness.

Objective

This case study aims to carry out the implementation of nursing care for NY clients. O and a family with hypertension who live in Dusun Colendra RT. 013 RW. 05, Sindangsari Village, Cikoneng District, Ciamis Regency, and saw the effect of the implementation after being given young coconut water to Mrs. O to lower high blood pressure with hypertension problems.

Method

In this study the authors used a descriptive analysis research design with a case study approach. By objectively describing and digging up accurate data regarding comprehensive nursing care according to the nursing assessment process, establishing diagnoses, interventions, implementation, and evaluation of Mrs. O faced family problems, namely ineffective health management in the Cikoneng Health Center UPTD area, precisely in Colendra Hamlet, RT. 013 RW. 05, Sindangsari Village, Cikoneng District, Ciamis Regency. In addition, in this study, observations were made of non-pharmacological therapies for

reducing blood pressure after the intervention was given young coconut water who had hypertension problems.

Before intervention, clients and families are also given health education related to hypertension to gain knowledge and also provide information to clients and families regarding hypertension. Interventional administration of 400 ml of young coconut water or one large glass is carried out periodically, then the client's blood pressure is checked using a sphygmomanometer, which is then checked the next day for 4 days visiting 3 times giving coconut water which aims to find out how effective the administration is in reducing pressure client's high blood pressure

Results

The author performs nursing care and data collection in Ny. O, who lives in Dusun Colendra, RT. 013 RW. 05, Sindangsari Village, Cikoneng District, Ciamis Regency, Working Area of the UPTD Cikoneng Health Center on 31 May 2023 to 03 June 2023 for 4 visiting days.

The results of the study found objective data on TTV examination: T: 34.8°C, P: 80x/minute, R: 20x/minute, S: 170/110 mmHg. Subjective data the client has had hypertension for a long time which is caused by his lifestyle which likes food with a salty taste, when asked questions the client often complains if his blood pressure rises (up to 200/110 MmHg) feels dizzy, neck stiff, the client also says his family rarely check their health to health facilities because of the economic situation that is not sufficient for the family.

Table 1. Data analysis

Data analysis	etiology	Problem
Subjective data Clients complain if their blood pressure rises (up to 200/110 mmHg) feel dizzy, neck stiffness, The client also said that the family rarely had their health checked at a health facility because of the inadequate economic situation of the family. Objective Data T: 34.8°C Q: 80 x/minute R: 20 x/minute S: 170/110 mm Hg	The inability of the family to care for sick family members and make decisions	Ineffective health management (D.0115) page 254

Tabel 2. Nursing Implementation

Diagnosis Nursing	Assessment before administration May 31, 2023	Nursing Implementation		
		Giving young coconut water 01 May 2023	Giving young coconut water 02 June 2023	Giving young coconut water 03 June 2023
Ineffective Family Health Management related to the inability to care for problematic family members and families	09.00 1. Assessment and collection of client and family data 2. Observing vital signs Results:	09.15 1. Observing vital signs. Results: T: 36.8°C P: 76x/minute R: 20 x/minute S:160/110 MmHg.	10.00 1. Observing Vital sign. Results: T: 36.8°C P: 72x/minute R: 22 x/minute S:160/100mmHg	12.30 1. Observing vital sign Results: T: 36.8°C P: 70x/minute R: 20 x/minute S: 150/90 MmHg

unable to make the right decisions	<p>T: 34.8°C P: 80x/minute R: 20 x/minute S: 170/110mmHg.</p> <p>3. Identify the family's response if sick client. Response: The family says if feel pain the client only drinks over-the-counter drugs and sleep rest.</p> <p>4. Motivate the development of attitudes and emotions which supports health efforts. Response: client Mrs. O say anxious with circumstances the situation.</p> <p>5. Creating changes to the home environment optimally Response: Client say very home comfortable.</p> <p>6. Advise Facility clients use medical facility which exists. Response: client say rarely check health because the economy is not sufficient.</p> <p>7. Deliver contract time and agreement about non pharmacological therapy water giving young coconut for lower hypertension. Response: Family and clients accept with pleasure</p>	<p>2. identify action family response if the client is sick Response: family say if sick client will brought to the facility that health there is.</p> <p>3. Motivate development attitudes and emotions which supports health efforts. Response: client Mrs. O say the anxiety is reduced because get motivation.</p> <p>4. Advise client facilities use existing health facilities. Response: Client said it would go to the health center regularly and also will use BPJS if sick</p> <p>5. Doing the first administration of non-therapy water pharmacology coconut for lower blood pressure. Response: client Say like coconut water young and will be routine drink it.</p>	<p>2. Identify Family response action if sick client. Response: Family said he would routinely give coconut water every day.</p> <p>3. Doing giving the second day of non-therapy pharmacology young coconut water for reduce hypertension. Response: Remote client calmer the effect of hypertension symptoms such as dizzy until the neck feels reduced.</p>	<p>2. Doing day gift third non-therapy water pharmacology young coconut for lower Hypertension. Response: The client feels far better. Encourage clients to do it independently at home</p>
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Discussion

The author carries out family nursing care based on plans prepared through collaboration between clients and families. The implementation in this case study uses young coconut water as a therapeutic medium that aims to reduce high blood pressure in the client Ny. O who has hypertension. The implementation was carried out for 3 days of giving, with 4 visits to the client's house. In this case, the author has no difficulty in providing nursing care, because of permission from the UPTD Cikoneng Health Center and the openness of clients and families to receive nursing care services that have been arranged so that they run well.

The implementation of the award is in accordance with the research theory Kaaba et al., (2019) mentioned that young coconut water was giving as much as 250 ml for 5 days and was given 2 times/day to people aged 60 to 79 years which proved significant with a decrease in p-value (0.005) changes in blood pressure: Systole decreased in average ± 34 mmHg and also the diastolic pressure decreased by an average of ± 2 mmHg.

On the first day of the assessment before the implementation of young coconut water therapy which was carried out on May 31, 2023 when the examination was carried out, the results were T: 34.8°C, P: 80x/minute, R: 22x/minute, and S: 170/110 mmHg, the client was still worried about the situation.

On the 2nd day of the visit, which was carried out on June 1, 2023 at 09.15 WIB the author began to provide implementation of 400 ml of young coconut water therapy, the client was told to calm down and pray, don't panic so that his blood pressure stabilized, the examination results fell to S: 160/ 110mmHg

On the 3rd day of the visit, on June 2, 2023 at 10.00, the second implementation was given but the administration of young coconut water showed that the client was much calmer when the client's blood pressure was measured, it was still S: 160/100 MmHg.

On the 4th day, June 3, 2023 at 12.30, giving the third young coconut water, the client feels calmer, symptoms such as dizziness, throbbing headaches, and neck stiffness are starting to improve, S: 150/90 MmHg, the client says he will regularly consume young coconut water and also will routinely control his health to a health facility.

The author evaluated the changes given to the coconut water intervention from the first day before it was given and the 2nd to the fourth day which was the last day of the young coconut water intervention, the results were quite significant, there was a decrease from the first day of 170 mmHg and the last day of the study fell to 150/ 90 mmHg client Mrs. O also feels better symptoms of hypertension such as headaches and neck stiffness.

The results of this implementation are supported by research Kaaba et al., (2019) stated the results after being given young coconut water at a dose of 250 cc within five days with two times a day administration to clients aged 60 years to 79 years, Significant with p-value (0.005) changes in blood pressure: Systolic decreased on average ± 34 mmHg Diastolic occurred a mean decrease of ± 2 mm Hg. According to him, coconut water can be an alternative to increase potassium intake in the body so that it can balance the amount of sodium so that blood pressure can be controlled. In addition, it is also mentioned in the research Andika et al.,(2018) that consuming foods that are high in potassium, low in sodium such as coconut water is important in order to optimize blood pressure so that it is at normal

levels. Because young coconut water that is 6-8 months old contains a lot of potassium, which is quite high, ranging from 291 mg/100 cc.

Research by Komang et al (2015) in citation S.P. Rahayu et al., (2021) mentioned that in hypertensive patients who consumed young coconut water at a dose of 250 cc in the morning and evening within 2 weeks of administration, the systolic pressure decreased on average around 4.98 mmHg and, the diastolic was at 0.32 mmHg.

Also in line with Roza et al.,(2020) Young coconut water given in an amount of 350 ml for seven days showed an average decrease in systolic of 9 mmHg and 5 mmHg diastolic according to the magnesium content in young coconut water affected lowering blood pressure in hypertension. Magnesium is also useful as an antioxidant in the prevention of hypertension by reducing blood vessel damage from oxidative stress and preventing blood vessel injury.

Conclusion

Based on the client's family nursing care Mrs. O who has the problem of ineffective family health management with hypertension in the UPTD Cikoneng Health Center, to be precise, in the Colendra village, RT. 013 RW. 05, Sindangsari Village, Cikoneng District, Ciamis Regency, the authors can conclude that the results are quite significant before being given the client's blood pressure of 170/110 MmHg, it has decreased to 150/90 MmHg after being given young coconut water, the client also feels better so it can be used as an alternative hypertension treatment.

The author does not fully carry out the intervention that has been prepared because there are time constraints, environmental factors, and family in the preparation. So it is hoped that the next writer will be more optimal in providing nursing care and also the hope that clients consume young coconut water every day according to what has been recommended by the author to reduce blood pressure.

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