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Lifestyle Description in Kidney Failure Patients Pre Hemodialysis

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ABSTRACT

Chronic kidney failure is a situation where the kidney's performance slowly decreases so that it cannot maintain optimal body balance until the end and can cause a person to undergo hemodialysis. Chronic kidney disease can be triggered by various lifestyle factors, including consuming herbal medicines, drinks containing alcohol, smoking, not drinking enough water, and consuming energy supplement drinks. This research aims to find out what the lifestyle of pre-hemodialysis chronic kidney failure patients is like in the hemodialysis room at Sidikalang Regional Hospital. This research method is this type of research, namely quantitative descriptive research, carried out from January to April 2024, with a population of 42 respondents using total sampling techniques and data analysis using univariate analysis. The results of this research show that based on the consumption of water <2L/day as much as 64.3%, holding BAK as much as 78.6%, consuming salty foods as much as 85.7%, consuming medicines as much as 85.7%, consuming traditional medication as much as 59.5%, smoking >10 cigarettes/day as much as 59.5%, alcohol consumption as much as 35,7%, and exercising <3x/week as much as 85.7%. The suggestion in this research is that efforts are needed to improve lifestyle towards a healthy lifestyle to prevent the incidence of chronic kidney failure.

Keywords: chronic renal failure, lifestyle, hemodialysis

INTRODUCTION

Indonesia is one of the countries with cases of kidney disease that continue to increase. Kidney failure is not just a health threat, but a death threat so this disease can cause a high mortality rate. Continuing kidney failure is a global health challenge and results in increasing mortality rates. The prevalence of chronic kidney disease means that chronic kidney failure is a significant health problem, with around 1 in 10 of the world's population affected by chronic kidney disease. It is estimated that 5 to 10 million patient deaths occur each year due to acute kidney damage. According to Basic Health Research in 2018, chronic kidney failure in Indonesia increased by around 0.38%, namely 713,783 people. In North Sumatra, it reached 36,410 people (Indonesian Ministry of Health, 2018). Based on an initial survey conducted at Sidikalang Hospital, 42 people with kidney failure were undergoing hemodialysis therapy.

Lifestyle, in a broad definition, refers to a lifestyle that is reflected in the various activities that a person carries out every day. It covers multiple aspects such as work, hobbies, shopping activities, sports, social interactions, interests in food, clothing styles, family relationships,

recreational activities, as well as an individual's view of himself, social issues, business, and product preferences. Lifestyle is not only limited to a person's social class or personality but includes all aspects of life that contribute to the way the individual lives their daily life, including various aspects that shape a person's identity and personality (Luthfianto & Suprihhadi, 2019).

Chronic kidney failure or end-stage kidney disease is a progressive or irreversible kidney function disorder, where the body cannot maintain metabolism and fluid balance. And necessary electrolytes (Haryono, 2013). Hemodialysis is a form of artificial kidney replacement treatment that aims to remove waste products from the body's metabolism and correct fluid and electrolyte balance disorders (Iin, 2021). Improving the quality of life in patients with Chronic Kidney Failure, the role of the family is more aware of the importance of support and motivation during hemodialysis therapy so that it can increase the patient's expectations and quality of life (Diah Anggita & Oktia, 2023) Renal failure patients undergoing maintenance dialysis experience significant physical and mental symptoms, depression, and low HRQOL. This decline necessitates special attention, especially as the kidney failure patient population expands (Butt et al., 2022).

Based on the results of research by Sari et al. (2023) regarding the description of lifestyles that cause chronic disease in the hemodialysis room showed that from 92 respondents it was found that almost all patients in the Hemodialysis Room consumed supplement drinks, amounting to 75 people (81.5%), smoking 50 (54.3%), consuming water 63 respondents (68.5%), consumption of herbal medicines by 57 respondents (69.9. The study Oktavia (2022) found that the majority of fruit and vegetable consumption was 99.9% less, the smoking behavior of the majority of smokers was 99.9%. 54.2%, the majority lack physical activity at 73.2% and the majority do not consume alcohol at 95.7%.

Based on the description above, researchers are interested in the lifestyle description of pre-hemodialysis chronic kidney failure patients at Sidikalang Regional Hospital. This type of research is quantitative descriptive research, namely research that describes ‘what is’ about a variable, symptom, or situation. These findings will be used to determine the lifestyle of pre-hemodialysis chronic kidney failure patients in the hemodialysis room. Research description of lifestyle in chronic kidney failure patients may have been done before, but this research has never been done at the regional level at Sidikalang District Hospital.

METHODS

This type of research is descriptive research. Where this descriptive research only describes "what is" about a variable, symptom, or condition (Arikunto, 2016) This research was carried out in the Hemodialysis room at Sidikalang Regional Hospital from January to May 2024. The research population was all chronic kidney failure patients who were undergoing hemodialysis therapy at Sidikalang Regional Hospital, namely totaling 42 people. This research uses a total sampling method because the population is relatively small, namely less than 100, so the entire population is used as a sample. Research samples for kidney failure patients must meet hemodialysis criteria and be willing to be subjects at the research location.

This research uses primary data collected from respondents through interviews, including demographic information like gender, age, occupation, income, and lifestyle habits. Secondary data is collected from the Sidikalang District Hospital, Dairi Regency, focusing on chronic kidney failure sufferers and hemodialysis patient visits. Both primary and secondary data are essential for understanding the research objectives. This research variable is the pre-hemodialysis lifestyle to find out lifestyle before kidney failure, researchers conducted interviews with a structured questionnaire of 8 questions covering each lifestyle. Lifestyle variables like water, urination, smoking, alcohol, salty food, physical activity, and drug consumption through structured questionnaires. The data processing stage in research is data collection, *editing, coding,* describe the data. The process begins when the respondent signs informed consent. Data analysis using frequency distribution to describe lifestyle of patients with prehemodialysis chronic kidney failure.

RESULTS

This research was conducted through direct interviews using a structured questionnaire containing closed questions to respondents. The following is a demographic description of the research subjects which can be seen in full in the table below:

Table 1. Distribution of Characteristics of Pre-Hemodialysis Kidney Failure Patients

Characteristics	Frequency	Percentage (%)
Age		
20-28 years	0	0.0
29-37 years	3	7.1
38-46 years	3	7.1
47-55 years	13	30.9
56-64 years	20	47.8
≥65 years	3	7.1

Characteristics	Frequency	Percentage (%)
Gender		
Man	29	69.1
Woman	13	30.9
Work		
Farmer	15	35.6
Self-employed	8	19.1
ASN	3	7.1
IRT	8	19.1
Other	8	19.1
Income		
< Rp. 2,800,000	8	19.1
> Rp. 2,800,000	38	80.9

Based on Table 1, you can see a picture of the characteristics of research subjects aged 56-64 years as many as 20 (twenty) people (47.8%), 47-55 years as many as 13 (thirteen) people (30.9%), 29-37 years as many as 3 (three) people (7.1%), 38-46 years as many as 3 (three) people (7.1%), > 65 years as many as 3 (three) people (7.1%), gender male- 29 (twenty-nine) (69.1%) men and 13 (thirteen) women (30.9%), 15 (fifteen) people (35.6%) work as farmers, self-employed, domestic workers, and others as many as 8 (eight) people (19.1%), ASN as many as 3 (three) people (7.1%), income > Rp. 2,800,000 as many as 38 (thirty-eight) people (80.9%), < Rp. 2,800,000 as many as 8 (eight) people (19.1%).

Table 2. Lifestyle Description of Pre-Hemodialysis Kidney Failure Patients

Lifestyle	Frequency	Percentage (%)
Drink Water		
≥2L/Day	15	35.7
≤2L/Day	27	64.3
Holding BAK		
No	9	21.4
Yes	33	78.6
Consume Salty Foods		
No	6	14.3
Yes	36	85.7
Consuming drugs		
No	6	14.3
Yes	36	85.7
Consumption of Traditional Medicine		
No	17	40.5
Yes	25	59.5
Smoking Habit		
No	14	33.3
Yes: < 10 cigarettes/day	3	7.2
> 10 cigarettes/day	25	59.5

Lifestyle	Frequency	Percentage (%)
Alcohol Consumption		
No	15	35.7
Yes: < 4 glasses/day	13	31.0
> 4 glasses/day	14	33.3
Exercise Habits		
< 3 times/week	36	85.7
> 3 times/week	6	14.3

Based on Table 2, it can be seen an overview of the lifestyle of research subjects based on the habit of consuming water > 2L/day as many as 15 (fifteen) people (35.7%), < 2L/H as many as 27 (twenty seven) people (64.3%), habit of holding BAK Not holding back as many as 9 (nine) people (21.4%), holding back as many as 33 (thirty three) people (78.6%), habit of consuming salty food as many as 36 (thirty six) people (85 .7%), did not consume as many as 6 (six) people (14.3%), habitually consumed drugs as many as 36 (thirty six) people (85.7%), did not consume as many as 6 (six) people (14 .3%), the habit of consuming traditional medicine is 25 (twenty five) people (59.5%), the habit of not consuming it is 17 (seventeen) people (40.5%), the habit of smoking >10 cigarettes/day is 25 (twenty five) people (59.5%), < 10 cigarettes/day as many as 3 (three) people (7.2%) and do not smoke as many as 14 (fourteen) people (33.3%), alcohol consumption habits > 4 glasses/day as many as 14 (fourteen) people (33.3%), < 4 glasses/day as many as 13 (thirteen) people (31.0%) and not consuming as many as 15 (fifteen) people (35.7 %), habit of exercising < 3 times/week as many as 36 (thirty six) people (85.7%), > 3 times/week as many as 6 (six) people (14.3%).

DISCUSSION

The results of this study show that the majority of respondents have the habit of consuming <2L/day of water, 64.28%. The research indicates that most respondents are lazy about drinking water due to their farming work, leading them to believe they will drink later due to their responsibility. As a result, they consume less than 2L of water daily. The study Sari et al., (2023) found that around 60% of human body weight consists of water. Lack of water can lead to diseases like constipation and kidney problems, as 2/3 of the human body weight is water. Water is crucial for the body's functions, as it makes up 75% of the brain, 82% of blood, 75% of the heart, 86% of the lungs, and 86% of the kidneys. Insufficient water intake hinders optimal metabolism, bone formation, and removal of toxic waste through the lymphatic system, kidneys, and intestines. Furthermore, it can disrupt kidney function. Therefore, water is very important for human survival. However, many people do not realize the importance of drinking

water for the body. Even though humans can survive without food, some people still consume less water than they need.

Based on BAK habits, the majority holds BAK as much as 78.57%. The study reveals that most respondents, particularly farmers, manage their bladders due to their job responsibilities. They anticipate needing to urinate later, while five drivers often hold their bladders due to the necessity of traveling. The majority of respondents believe they will need to urinate during their work hours. The practice of holding in urination can significantly harm kidney health by increasing pressure on the kidneys and urinary tract, leading to a buildup of toxins. Failing to maintain fluid and electrolyte balance in the body due to holding back BAK can also put an additional burden on the kidneys (Zahroh & Istiroha, 2023).

Based on salty food consumption habits, the majority consume 85.71%. The study found that most respondents frequently consume salty foods, and they prefer adding more salt to their cooking, such as using 1 spoon for vegetables, as it helps increase appetite and prevents a decrease in appetite. The study Elizabeth & Wahyuni (2023) found that the habit of consuming salty food is a risk factor for the incidence of chronic kidney disease (CKD). Both male and female subjects have the habit of consuming salty foods. Salty foods will in turn cause an increase in blood pressure (hypertension). Hypertension is the biggest cause/risk factor for chronic kidney failure (Zahroh & Istiroha, 2023). Therefore, as a preventive measure against CKD, blood pressure must be controlled by reducing the consumption of salty foods

Based on drug consumption habits, the majority consume 85.71%. The study found that respondents frequently consume pain relievers, such as Panadol or Mixagrip, at stalls instead of visiting a doctor or hospital for treatment, as they believe the cost of hospital visits will be higher. This habit is prevalent among respondents. Drugs that affect kidney damage are nephrotoxic. One of the drugs that have nephrotoxic properties is analgesic drugs. Taking this drug in the long term, every day for several years can make a person develop CKD. Daily living behaviors like smoking, high protein, herbal medicine, analgesic drugs, fat, and salt consumption are linked to a higher risk of chronic kidney disease (Firmansyah, 2022). Chronic Kidney disease caused by drugs progresses to end-stage kidney disease, necessitating permanent treatment like hemodialysis or kidney transplantation, necessitating proper drug consumption and dosage according to recommended guidelines.

Based on traditional medicine consumption habits, the majority consume 59.52%. The research found that most respondents consume traditional medicine, including herbal medicine, daily to

maintain strength and health, especially in their activities and work. They believe that daily consumption of herbal medicine doesn't negatively impact their kidney health. The studyZahroh & Istiroha (2023) found that consuming herbal medicine is a risk factor for chronic kidney disease because some chemicals and drugs cause kidney damage by forming crystals that cause tubular injury. Traditional medicine, or herbal medicine, is a combination of plant, animal, mineral, or extract ingredients used for treatment based on experience. It lacks standardization in safety and dosage, and some may contain toxic species or allergens, potentially leading to drug poisoning or adverse reactions. Therefore, excessive consumption of traditional medicine can cause kidney problems

Based on smoking habits, the majority smoked > 10 cigarettes/day, 59.52%. Respondents claimed that smoking could alleviate fatigue or stress, leading them to smoke. Smoking is the most important problem in society, smoking behavior can be divided into 2, namely passive smoking and active smoking. Smokers are 6 times more likely to develop kidney disease than non-smokers. Diabetes-related kidney disease (CKD) is influenced by both modifiable and non-modifiable factors. Modifiable factors include albuminuria, high blood pressure, dyslipidemia, obesity, smoking, and oxidative stress. Non-modifiable factors include genetics, race, age, sex, and diabetes duration. CKD remains a global public health issue (Shabrina et al., 2022).

Based on alcohol consumption habits, the majority consume as much as 64.28%. The study revealed that respondents frequently indulged in alcoholic drinks, believing it would alleviate fatigue after a day's activities. Complications such as acute kidney failure must be avoided, and analgesic therapy may be indicated The habit of drinking alcoholic beverages can cause various kinds of kidney diseases.

The study Steinmeyer and Flechtenmacher (2023), alcohol is a type of drink that hurts the kidneys. Alcohol can force the kidneys to work very hard. Alcohol consumption will cause strain on the kidneys. A careful history of patient's alcohol consumption is therefore vital. Clinical symptoms depend on the drug, dosage and patient's sensitivity. They can vary from asymptomatic increase in serum levels of creatine kinase, mild myalgia and cramps to muscle weakness, rhabdomyolysis, kidney failure and even death. The pathogenesis is often only partially known and multifactorial.

Based on exercise habits, the majority have exercise habits < 3x/week as much as 85.71%. Respondents are often lazy about exercising due to their perception that exercise is not as

important as they believe it is. The study (Trinasari, 2019) found that increasing physical activity (150 minutes per week) can reduce risk factors for the incidence of CKD and improve metabolic health. This is directed at improving blood pressure and body fat which leads to obesity. Increased blood pressure and obesity are risk factors for CKD. So you need to exercise at least > 3x/week to avoid kidney failure. The effectiveness of intradialytic exercise in ameliorating fatigue symptoms in patients with chronic kidney failure undergoing hemodialysis, in terms of exercise type, duration, time, and frequency (Wahida et al., 2023)

CONCLUSION

The results of this study show that based on the consumption of water < 2L/day as much as 64.28%, holding BAK as much as 78.57%, consumption of salty food as much as 85.71%, consumption of medicines as much as 85.71%, consumption of traditional medicine as much as 59.52%, smoking >10 cigarettes/day as much as 59.52%, alcohol consumption as much as 64.28%, and exercising <3x/week as much as 85.71%.

LIMITATIONS

This research can determine the lifestyle of pre-hemodialysis kidney failure patients. However, this research is only limited to describing the lifestyle of pre-hemodialysis renal failure patients only; It is necessary to discuss efforts to improve lifestyle towards a healthy lifestyle to prevent chronic kidney failure. It is hoped that future researchers will discuss in more depth the factors that can cause kidney failure and efforts to prevent it.

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