

The Effect Of Sipping Ice To Reducethirsty Feel In Chronic Kidney Disease Patients Who Have Hemodialysis In Rsud Bendan Pekalongan City

Isrofah¹, Moh.Projo Angkasa², Alpin Amar Ma'ruf³

* Nursing Programe, Faculty of Health Sciences , Pekalongan University
isrofahhandoko@gmail.com

ABSTRACT

The occurrence of Chronic Kidney Disease is increasing every year. Someone with Chronic Kidney Disease must do therapy, one of them is hemodialysis. With hemodialysis the patient feels excessive thirst due to fluid restriction. Sucking ice cube can be used as an alternative to reduce the level of thirst of patients with hemodialysis. The research conducted to know the effect of sucking on the ice cube to reduce thirst in the case of Chronic Kidney Disease which in hemodialysis therapy at RSUD Bendan. The research method uses pre-experiment with the design of one group pre test post test. With 36 respondent. The instrumen which is used was the categorical visual analog scale score. The result of different test using the Mann Whitney test were found to be significantly result, between before and after giving the intervention to sucking ice cube with the result of the significance value 0,000 ($p < 0,05$). This recommendation from observation is expected that suck an ice cube could be used to manage the thirst of patients with chronic kidney disease that in hemodialysis therapy.

Keyword : Chronic kidney disease, thirst, sucking ice cube

Introduction

Health issue that related to kidneys were increase from year to year. One of the kidney problems faced by people in developed country and developing countries is Chronic Kidney Disease. Chronic renal failure is a progressive and irreversible disruption of renal function that is the failure of body's ability to maintain metabolism and electrolyte fluid balance and than becomes uremia (Smeltzer & Bare, 2005 in 2016 pangaribuan). Indonesia is one of the countries with high rates of chronic kidney disease, according to WHO (2016) approximating that in Indonesia there will be 41.4% increase in kidney disease patient in 1995-2025 and according to the Indonesian Nephrology Association (PENEfri) there was 70,000 person estimated with kidney disease in Indonesia and it will continue to increase for about 10% each years. The data shows the prevalence increases linear with age, with a significant increase in the age group 35-44 years compared to 25-34 years age group. Male (0.3%) is higher than female (0.2%), rural communities (0.3%), not attending school (0.4%), self-employed, farmers / fishermen / laborers (0, 3%). According to data from the Central Java Health Office, the case in

Pekalongan City was 0.3% (Provincial Health Office of Central Java, 2014). From the data, there were 111 registered chronic kidney disease patients in Pekalongan City.

Hemodialysis (HD) is a procedure where patient blood is pull out from the patient's body and then it circulates in a machine called a dialiser outside the body. The frequency of HD treatment varies is depending on how much kidney function is leftover, mostly the patient doing HD twice a week, while the duration of hemodialysis is takes three until four hours in every therapy (Melo *et al*, 2015).

In practice, patient with Chronic Kidney Disease must maintain dietary of fluid restriction to prevent the liquid excess which is risky causing hypertension, pulmonary edema, kongesif heart attack and others cardiovascular diseases. Restrictions on liquids may affect some aspect of human body, such like the chaos of hormonal, social and psychological changing, thirsty and *xerostomia* or dry mouth. (Bambang *et al* ., 2016).

Recommendations from the Peter Munk Cardiac Center to overcoming thirst is by brushing the teeth and gargle more often (Weiland, 2011) while Solomon (in Arfany, Armiyati & Kusuma, 2014)

mentions to resolving the thirst is with *frozen grapes*, brushing teeth, chewing sugar-free gum and sips ice cubes. Researchers are interested in using ice cubes as research material to resolving the thirst in patients with chronic kidney disease. The use of ice cube by sipping it is effective in dealing with dry mouth (*xerostomia*). The ice cube itself is made of frozen boiled water, by using the ice cube it is intended to give the sensation of a cold feeling from the melting of ice cubes (Grace & Borley in Wahyu, 2015).

Methods

This research is pre-experiment research using one group pretest posttest design by examining the patient's characteristics such as age, gender, occupation and the duration of patients undergo hemodialysis presented in the distribution frequency (percentage). The normality test technique used is using the Shapiro Wilk technique. This because the number of respondents is under 50 respondents. Based on the normality test, the results of the pretest were normally distributed and the results of the posttest were not normally distributed. Then the researchers do the transformation of pretest data using paired t test ($p < 0.05$) and posttest data using the Mann Whitney test ($p < 0.05$). Then the hypothesis is accepted but if $p > 0.05$ then the hypothesis is rejected (Riyanto, 2017).

DISCUSSION RESULT

Data Characteristics of Respondents

Table 1

Distribution Frequency of Respondents by Patients Age who undergo Hemodialysis

No	Age Category	Frequency	Percent (%)
1	26-35 years old	2	5.5
2	36-45 years	11	30.6
3	46-55 years	6	16.6
4	56-65 years	12	33.5
5	66-75 years old	5	13.8
TOTAL		36	100%

The results showed that respondents age in the 26-35 years category amounted to 2 people (5.5%), 36-45 years category amounted to 11 people (30.6%), the age category 46-55 years amounted to 6 people (16.6%), the age category 56-65 years amounted to 12 people (33.5%) and the age category 66-75 years amounted to 5 people (13.8%) with the highest number being is in the age category 56-65 years with 12 people (33.5%). The 56-65 year age group is included in the elderly group, according to Laily (2016) when entering adulthood before entering the elderly, adults disposed have maturity in thinking and making the best decisions for himself. Adults tend to be able to maintain obedience to therapy programs related to fluid restriction, especially in patients with chronic kidney disease, this is contrary to the elderly because there is a tendency to deny that he has a problem with several diseases.

Table 2 Distribution Frequency of Respondents According to Gender of Patients Undergoing Hemodialysis

No	Gender Category	Frequency	Percent (%)
1	Male	26	72.2
2	Female	10	27.8
TOTAL		36	100%

The results of the study is that the gender category of respondents there were 26 male (72.2%) and 10 female (27.8%). Then the majority were male with a total of 26 people (72.2%). This is in line with the research by Wahyu (2015) that states the anatomy of the male urinary tract is much longer than women, this allows the deposition of substances contained in urine more than women. Prolonged precipitation results in kidney damage. According to Dewi (2010) in her study at Tabanan Hospital in Bali, hemodialysis patients were dominated by men because men had unhealthy lifestyles compared to women. The body composition between men and women is different, men tend to have more muscle tissue while women have more fat content in their body. So female body fluids are less than men which results in lower thirst threshold for women compared to men. (Kozier.

Erb, Berman & Snyder, 2011 in Makrumah, 2017).

Table 3 Distribution Frequency of Respondents
According Work Attribute

No	Job Category	Frequency	Percent (%)
1	Work	12	33.3
2	Does not work	24	66.7
	TOTAL	36	100%

The results of research in the occupational category are respondents as workers / work are 12 people (33.3%) and those who do not work are 24 people (66.7%). Most respondents in the non-working category were 24 people (66.7%). According to Septiwi (2010) patients with chronic kidney failure tend to leave their work because they have to undergo routine hemodialysis, physical changes in the form of inability to do work as before was a factor in hemodialysis patients leaving their jobs .

Table 4 Distribution Frequency of Respondents
According To Hemodialysis Duration

No	HD Duration	Frequency	Percent (%)
1	1-2 years	10	27.8
2	2-3 years	11	30.6
3	3-4 years	8	22.2
4	4-5 years	7	19.4
	TOTAL	36	100%

The results showed that in the hemodialysis duration in 1-2 years was 10 people (27.8%), 2-3 years were 11 people (30.6%), 3-4 years were 8 people (22.2%) , 4-5 years are 7 people (19.4%). From the data obtained some patients have 2-3 years hemodialysis therapy which is 11 people (30.6%). Laily (2015) states that the longer the patient undergoes hemodialysis, the better the patient's adaptation, both from the effects and consequences of hemodialysis such as fluid restriction. This is because the patient has accepted (*accepted*) , so the longer undergoing hemodialysis, the more obedient.

Table 5 Pre Test Results Level of
Respondents' Thirst Level n

No	Level of Thirst	Frequency	Percent%
1	Mild (1-3)	5	13.9
2	Moderate (4-6)	17	47.2

3	Severe (7-10)	14	38.9
	TOTAL	36	100%

From Table 4.5 shows that the majority of the pre test was on a scale of thirst were as many as 17 people (47.2%).

Table 6 Post Test Results Level of
Respondents' Thirst Level n

No	Level of Thirst	Frequency	Percent%
1	Mild (1-3)	22	61.1
2	Moderate (4-6)	8	22.2
3	Severe (7-10)	6	16.7
	TOTAL	36	100%

From table 6. it shows that most of the posttest were on a mild thirst scale of 22 people (61.1%)

Based on the results of the study showed that there was a decrease in the level of thirst after giving the intervention to sips ice cubes. Mayus (2013) said that by using ice cube is very useful to reduce thirst in patients while undergoing fluid intake restrictions. The water content in ice cubes can provide a fresh and cold effect and can resolve the thirst feelings of patients undergoing hemodialysis.

Table 7 Normality Test Results

	Satistic	Frequency	P value
Pre Test	950	36	.104
Post Test	850	36	0.002

From these normality test results its saw that the results of the *pretest* data are normally distributed and the *post test* data are not normally distributed . Then the next to test the hypothesis on a group *pretest t* with a normal distribution using *Paired t-test* and the group *post-test t* for distribution is not normal then using a nonparametric test *man whitney*.

Table 8 T test results

	N	The mean	P value
Pre Test	36	6.11	0,000
Post Test	36	3.69	0,000

Based on Table 8, the results show that the average *pretest* was 6.11 and *posttest* 3.69 with a *p value* of 0.000, so that it was stated there were significant differences from before and after the administration of the ice cube intervention in Bendan City Hospital, Pekalongan.

Table 9 Mann Whitney test results

	Pre-Post Frequency	Pre-Post Value	P value
Pre Test	36	47.49	0,000
Post Test	36	25.51	0,000

From the results of the table. 9. The test results obtained above *Mann Witney* in getting the results *p value* of 0.000 ($p < 0.05$), with the average value *Prete* 's is 47.47 and *posttest* 25.51. Then it can be concluded that there is a decrease in the level of thirst between *pre* and *post* in patients undergoing hemodialysis at Bendan City Hospital in Pekalongan.

Conclusion

From the results of the analysis and discussion of the results of research that has been carried out, then it is concluded as follows:

1. Characteristics of respondents who experience thirst when undergoing hemodialysis is in the age category 65-65 years, male and the majority have not worked with the length of hemodialysis around 2-3 years.
2. *Pre* data show thirst level in the mild category of 5 people (13.9%), moderate 17 people (47.2%), and severe 14 people (38.9%) and data after *pre* intervention show thirst level in the mild category as many as 22 people (61.1%), 8 people (22.2%), and severe 6 people (16.7%).
3. There was a difference in the level of thirst before and after the intervention of sipping ice cubes in patients with chronic kidney disease undergoing hemodialysis at the Bendan City Hospital in Pekalongan with a significant result of *paired t test* 0,000 ($< p \text{ value } 0.05$).
4. There is an effect of sipping ice cube on the decreasing the level of thirst in hemodialysis patients at Bendan City Hospital, Pekalongan with the results. Significant *Mann Whitney test* 0,000 ($< p \text{ value } 0.05$).

Suggestion

1. For respondents
This study is expected to increase the quality of life for respondents, that is chronic kidney disease patients who is undergoing hemodialysis at the Bendan City Hospital in Pekalongan.
2. For the Hospital of Bendan District Hospital
This research is expected to be applied in the Hemodialysis Unit at Bendan City Hospital in Pekalongan City to overcome thirsty problems in patients with chronic kidney failure.
3. For Health Workers
The results of this study are expected to be a choice of nursing interventions in thirst management to provide education and intervention to suck ice cubes for patients with chronic kidney disease while undergoing hemodialysis.
4. For Future Researchers
Researchers can then modify the intervention to reduce thirst in patients with chronic kidney failure.
5. For students.
The results of this study can be used as a reference for further research.

References

- Bambang Utoyo *et. al.* 2016. Pengaruh Stimulasi Pemberian Tablet Hisap Vitamin C Terhadap Peningkatan Sekresi Saliva Pada Pasien Gagal Ginjal Kronik yang Menjanlani Terapi Hemodialisis Di RS PKU Muhammadiyah Gombong. *Jurnal Ilmiah Kesehatan Keperawatan*, Vol 12, No 1 Febuari.
- Dewi Asmira, Nurchayati Sofiana, Jumaini. 2017. *Perbedaan Efektifitas Mengunyah Permen Karet Rendah Gula Dan Mengulum Grape Ice Cube Terhadap rasa Haus Pada Pasien Gagal Ginjal Kronis Yang Menjalani Hemodialisa*. Riau. Asmiradewi01@gmail.com.
- Dinkes Prov. Jateng 2014. *Profil Kesehatan Jawa Tengah 2014*. Diakses pada tanggal 17 Januari 2019, jam 14:00.
- Mayus, 2013. Ice and water efficiency in the management of thirst in the immediate

- post operative period: randomized clinical trial. J nurs UFPE
- Melo OS, Riberio LRR, Costa ALRC *et. al.* 2015. *Community Impact Of Integrates Terapy For Renal Patients People During Session Hemodialysis.*
- Riyanto, A. 2017. Aplikasi Metedologi Penelitian Kesehatan. Yogyakarta. Nuha Medika.
- Rumondang Pangaribuan. 2016. Analisis Praktik Klinik Keperawatan Pada Pasien Chronic Kidney Disease (CKD) Yang Menjalani Hemodialisa dengan Intervensi Mengulum Es Batu Terhadap Kelebihan Volume Cairan Di Unit Hemodialisa RSUD Taman Husada Bontang 2016.
- Salomon. 2016. Ginjal Ginjal Ginjal dan Penanganannya. Jakarta : Reneka Cipta
- Septiwi, Cahyu. 2010. Hubungan Antara Adekuadi Hemodialisis Dengan Kualitas Hidup Pasien Hemodialisa Di Unit Hemodialisa RS Prof Dr Margono Sukarjo Purwokerto. *Jurnal keperawatan*
- Wahyu Arfany *et. al.* 2015. Efektifitas Mengunyah Permen Karet Rendah Gula dan Mengulum Es Batu Terhadap Penurunan Rasa Haus Pada Pasien Penyakit Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di RSUD Tugurejo Semarang. *Jurnal Keperawatan dan Kebidanan.*