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ANALYSIS OF COMPLIANCE WITH LIMITING FLUID INTAKE WITH INTERDIALYTIC WEIGHT GAINS (IDWG) IN CHRONIC CHILDREN'S DISEASE (CKD) PATIENTS ON HEMODIALYSA AT TZU CHI HOSPITAL JAKARTA

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ABSTRACT

Chronic Kidney Disease is defined as kidney damage and / or a decrease in Glomerular Filtration Rate (GFR) of less than 60mL / min / 1.73 m2 for a minimum of 3 months. Indonesian Nephrology Association (2017), the proportion of etiology or basic disease of CKD patients is hypertension and diabetic nephropathy. One of the stages of dialysis that can be performed on Chronic Kidney Disease sufferers is hemodialysis based on 2 pillars, namely limitation of fluid and disposal of metabolic waste products from the blood by using a dialysis machine. This study aims to determine the relationship of compliance with fluid intake restrictions on changes in Interdialytic Weight Gains in patients with Chronic Kidney Disease on Hemodialysis in Tzu Chi Hospital. The design of this research is analytic descriptive with cross sectional approach. The sample of this study was 35 respondents of CKD on Hemodialysis with total sampling technique. The instrument used in this study was a questionnaire. The results of the study most of the respondents female sex, average of age 53,8 years, Senior high Schooll educated and University, average time of hemodialysis 2,1 years, level of adherence obedience, Interdialytic Weight Gains value G 3.5%. The results of statistical tests using Chi Square showed that there was a relationship between adherence to restriction of fluid intake to changes in Interdialytic Weight Gains in patients with Chronic Kidney Disease on Hemodialysis in Tzu Chi Hospital (p = 0.021).

Keywords: fluid restriction compliance; hemodialysis; Intradialytic Weight Gain (IDWG)

BACKGROUND

Chronic Kidney Disease is defined as kidney damage and/or a decrease in the Glomerular Filtration Rate (GFR) of less than 60 mL/min/1.73 m2 for at least 3 months. Indonesian Association of Nephrology (2017), the proportion of etiology or underlying disease of CKD patients is hypertension in first place at 36% and diabetic nephropathy or known as diabetic kidney disease is in second place. Other conditions that can cause kidney damage include inflammatory diseases such as glomerulonephritis, polycystic kidney disease, malformations during fetal development in the mother's womb, lupus, obstruction due to kidney stones, tumors or enlargement of the prostate gland, and recurrent urinary tract infections (Wilson, 2005) . Chronic Kidney Disease (CKD) is a global public health problem with increasing prevalence and incidence of kidney failure, poor prognosis and high costs.
In Indonesia, the prevalence of Chronic Kidney Disease (permil) ≥ 15 years based on a doctor's diagnosis, in 2013 was 2.0 and increased in 2018 to 3.8. The proportion of people

aged ≥ 15 years who have had or are currently undergoing dialysis who have been diagnosed with chronic kidney failure is 19.3% (RISKESDAS, 2018).

Based on a preliminary study conducted by researchers at the Tzu Chi Hospital Hemodialysis Unit in September - October 2023, data on hemodialysis patients was obtained for 35 HD patients. From the results of interviews with researchers with hemodialysis patients, it was found that 20 non-compliant patients experienced weight gain between the weight after the first HD and the weight before the second HD of 5%. Based on the patient's confession, the increase in weight was due to a lack of compliance and the patient's ability to resist thirst and control daily fluid intake.

Chronic Kidney Disease treatment is divided into 2 stages, namely conservative measures and dialysis or kidney transplantation. One of the dialysis procedures that can be performed on end-stage Chronic Kidney Disease sufferers is hemodialysis (Lewis et al., 2014). Hemodialysis is based on 2 pillars, namely fluid restriction and removal of metabolic waste products from the blood using a dialysis machine. Ideally hemodialysis is carried out 2-3 times per week (Alam & Hadibroto, 2007).

Patient compliance with health care providers' recommendations and treatment is critical to the success of an intervention. Unfortunately, non-compliance is a big problem, especially in patients undergoing hemodialysis. And it can impact various aspects of patient care, including consistency of visits, treatment regimens and food and fluid restrictions. Overall, it has been estimated that approximately 50% of HD patients do not comply with at least part of their hemodialysis regimen (Kamerrer, 2007).

IDWG is influenced by the patient's own factors (internal) and external factors such as physical and psychosocial factors. Factors that influence interdialytic weight gain are age, gender, education level, thirst, stress, self-efficacy, family support, social support, amount of fluid intake. Restricting fluid intake in patients with chronic renal failure requires attention to prevent complications. Fluids coming in and out must be balanced, both through urine and what comes out without the client realizing it (Guyton, 2007). The recommended 24 hour fluid intake for patients undergoing hemodialysis is 500cc (IWL) + urine output/24 hours. For example, someone who excretes 300 cc of urine/24 hours, then the fluid they can consume is 500 cc+300 cc = 800 cc/24 hours (Malawat, 2001). Non-compliance has a very worrying impact because it will affect the occurrence of acute and chronic complications, the length of treatment and impact on productivity and reduce human resources. Prevention and control efforts must be assisted by all parties, both the community and related professions, especially health workers. Nurses as a health profession have a very big role because they have the longest interaction time with patients in health institutions, especially in providing important information to increase patient compliance.

Inter Dialytic Weight Gain (IDWG) is an indicator of patient compliance with fluid management. One of the causes of death in chronic kidney disease patients on hemodialysis is due to uncontrolled fluid intake. This condition is caused by increased blood pressure and makes the heart work harder. The buildup of fluid will also enter the lungs, making the patient experience shortness of breath, causing death. A sharp increase in IDWG can be prevented if patients undergoing hemodialysis adhere to limiting fluid intake

Various studies regarding the compliance of Chronic Kidney Disease clients receiving hemodialysis therapy (Kim, 2010) have obtained very varied results. In general, dialysis patient non-compliance includes 4 (four) aspects, namely non-compliance with the hemodialysis program (0% - 32.3%), non-compliance with the treatment program (1.2% - 81%), non-compliance with fluid restrictions (3.4% - 74%) and non-compliance with the diet program (1.2 – 82.4%). The impact of non-compliance can affect the client's quality of life, increase health care costs, increase client morbidity and mortality.

The main problem that occurs in patients undergoing hemodialysis is weight gain between the two periods of hemodialysis or what is called Interdialysis Weight Gain (IDWG) (Black & Hawk, 2009). Some patients experience difficulty in limiting fluid intake, but they do not have an understanding of appropriate strategies that can help them in limiting fluids, so that an increase in Interdialytic Weight Gain (IDWG) that exceeds normal limits can occur (Tjokoprawiro et al., 2015).

The increase in IDWG has a serious impact, 60-80% of patients die due to excess fluid and food intake in the interdialytic period, because excess fluid in the interdialytic period can result in pulmonary edema or congestion, so monitoring fluid intake in patients is the main action that nurses must pay attention to. (Indonesian Nephrology Association, 2016). An increase in IDWG exceeding 5% of dry body weight can cause various complications such as hypertension, hypotension, intradialysis, left heart failure, ascites, pleural effusion, congestive heart failure and can result in death (Black & Hawk, 2009).

There are several solutions that nurses can do, including educating patients to drink using small glasses, reducing consumption of salt and flavorings (MSG), avoiding eating salty and spicy foods, avoiding exposure to sunlight, limiting the amount of fluid intake (total urine per 24 hours + 500ml) (Ashley & Morlidge, 2008). Patients are also advised, if they are thirsty, to consume frozen fruit and suck ice cubes (1 ice cube is equivalent to 30 ml of drinking water) and to chew gum as an effort to stimulate saliva production to keep the mouth moist and reduce thirst due to dry mouth.

Based on this background, the researchers were interested in conducting research entitled "Analysis of compliance with fluid intake restrictions on changes in Interdialytic Weight Gains in sufferers of Chronic Kidney Disease on Hemodialysis at Tzu Chi Hospital Jakarta".

METHODS

Research design is a plan, structure and strategy chosen by researchers in an effort to answer research problems (Notoatmojo, 2012). This research uses a descriptive analytical method with a "cross sectional" research design. The subjects used were chronic kidney failure patients on hemodialysis at Tzu Chi Hospital. This research did not carry out intervention and only distributed questionnaires.

RESULTS

In this study, the sample of respondents was 35 people suffering from Chronix Kidney Disease on hemodialysis at Tzu Chi Hospital. The description of the characteristics of the respondents observed included age, gender, education, duration of hemodialysis, body weight, compliance with fluid restrictions and interdialytic weight gain.

Table 4.1. Character distribution of age respondents in sufferers of Chronic Kidney Disease on Hemodialysis

(n = 35)

Variabel	Mean	Standar Deviasi	Min-Max
Age	53,83	12,453	26 – 72

The results in table 4.1 show that the characteristics of the 35 respondents showed that the average age of the respondents was 53.83 years with a standard deviation of 12.453 years. The youngest respondent is 26 years old and the oldest is 72 years old.

Table 4.2. Distribution of gender characteristics of respondents in sufferers of Chronic Kidney Disease on Hemodialysis

Jenis Kelamin	Jumlah	Persentase (%)
Female	14	40
Male	21	60
Total	35	100

The results in table 4.2 show that the characteristics of the 35 respondents were mostly male, 21 people (60%), while the remaining 14 people (40%) were female.

Table 4. Distribution of educational characteristics of respondents in sufferers of Chronic Kidney Disease on Hemodialysis

(n = 35)

Pendidikan	Jumlah	Persentase (%)
Elementary-Middle School	0	0
High School-Equivalent	10	28,6
College or University	25	71,4
Total	35	100

The results in table 4.3 show that the educational characteristics of 25 respondents are college or university education.

Table 4.4. Distribution of characteristics of respondents to the duration of hemodialysis in sufferers of Chronic Kidney Disease on Hemodialysis

Variabel	Mean	Standar Deviasi	Min-Max
Duration of Hemodialysis	2,1	0,928	1-4

The results in table 4.4 show that the characteristics of the 35 respondents mean the average duration of hemodialysis is 2.1 years.

Table 4.5. Description of compliance with fluid restrictions in sufferers of Chronic Kidney Disease on Hemodialysis

(n = 35)

Compliance	Jumlah	Persentase (%)
Lack of Complied	20	57,2
Complied	15	42,8
Ttotal	35	100

The results in table 4.5 show that the characteristics of the 35 respondents were that most of the respondents complied with limiting fluid intake as many as 15 people (42.8%), while the remaining 20 people (57.2%) respondents did not comply with limiting fluid intake.

Table 4.6. Body weight distribution and Interdialytic Weight Gain (IDWG) in sufferers of Chronic Kidney Disease on Hemodialysis

(N = 35)

Variabel	Mean
BB Post HD	64,99 kg
BB Pre HD	63,66 kg
IDWG	3,2 %

The results in table 4.6 show that the characteristics of the 35 respondents showed an average pre-HD weight of 64.99 kg, post-HD weight gain of 63.66 kg, and interdialytic weight gain of 3.2%. If the results are divided into categories, 15 people will get Interdialytic Weight Gain >3.5% and 20 people will get Interdialytic Weight Gain ≤ 3.5%.

Table 4.7. Analysis of the relationship between compliance with fluid intake restrictions and changes in Interdialytic Weight Gains in sufferers of Chronic Kidney Disease on Hemodialysis

(N=35)

Compliance	IDWG				Total		P value
	Female	%	Male	%	N	%	
Lack of complied (>3,5%)	9	67	11	33	20	100	0,021
Compled (≤3,5%)	5	55	10	45	15	100	
Total	14	40	21	60	35	100	

The results of data analysis from 35 respondents in table 4.7 showed that between compliance with fluid restrictions and the Inter-Dialytic Weight Gain (IDWG) value, it was found that 20 (57%) patients who did not comply with fluid restrictions had an IDWG ≤ 3.5% (good/normal), and there were 15 (43%) patients who adhered to fluid restrictions who had IDWG > 3.5% (excessive weight gain). The results of the Chi Square test obtained a value of p = 0.021, so it can be concluded that there is a difference in the proportion of changes in Inter-Dialytic Weight Gain (IDWG) values between patients who comply and do not comply with fluid restrictions. From the results of the analysis, it was also obtained that OR = 4.886, meaning that patients who complied with limiting fluid intake had odds 4.886 times higher for an Inter-Dialytic Weight Gain (IDWG) value ≤ 3.5% (normal weight gain). In other words, respondents who comply are 4.886 times compared to respondents who do not comply.

Based on the research conducted by the researcher, several things were obtained to achieve the specific objectives of this research. The first is that researchers can identify compliance with fluid restrictions in Chronic Kidney Disease (CKD) sufferers on Hemodialysis at Tzu Chi Hospital.

As is known, there are 3 (three) compliance parameters, namely the amount of fluid consumed by the respondent, monitoring the amount of urine excreted by the respondent, and the third, namely limiting the consumption of fruit containing water. The results of this study showed that the majority of respondents did not comply with limiting fluid intake, 20 people (57%). Compliance is a term used to explain obedience or surrender to predetermined goals. Health suggests that compliance is directly proportional to the specified treatment goals.

Compliance with a health program is a behavior that can be observed and therefore can be directly measured as achieved in the program (Arditawati, 2013; Rosiana, 2014).
In general, dialysis patient non-compliance includes 4 (four) aspects, namely non-compliance with the hemodialysis program (0% - 32.3%), non-compliance with the treatment program (1.2% - 81%), non-compliance with fluid restrictions (3.4% - 74%) and non-compliance with the diet program (1.2% – 82.4%) (Syamsiah, 2011). Non-adherence to a fluid-restricted diet can increase mortality in hemodialysis patients if there is an increase in body fluids of 5.7% of dry body weight during hemodialysis sessions. Many factors cause ignorance of the CKD diet. According to Desitasari, et al (2014), factors that influence patient non-compliance with the CKD diet are the level of knowledge, attitudes and support provided by the family. According to Ash, et al (2014) unclear guidelines regarding the CKD diet are also a factor causing non-compliance.
According to the researchers' analysis, compliance is a manifestation of knowledge, experience as well as the patient's psychology. After the sufferer knows his current condition and has felt what it feels like to undergo therapy, which only improves his condition temporarily, if not taken care of, it will get worse and the sufferer's mental readiness to accept the condition of the disease he is suffering from.
As the author has explained in Figure 2.1, what factors influence compliance with fluid restrictions. Namely Age, Education, and Body Weight. The results of this research show that the characteristics of the 35 respondents are that the average age of the respondents is 53.83 years. Age is one of the risks of chronic kidney failure. This shows that as you get older, your kidney function decreases due to a decrease in glomerular excretion rate and a decrease in kidney function. Fefendi (2008) explains that patients of productive age feel motivated to recover and have a high life expectancy and are the backbone of the family. An increase in IDWG can occur at any age, this is related to compliance in regulating fluid intake. The results of research conducted by Kimmel et al (2000) show that age is a strong factor in the level of patient compliance, where young patients have a lower level of compliance than older patients. According to the researchers' analysis, the older you get, the more the function of the physiological anatomy of the human body declines and decreases, especially the anatomy of the kidneys, which has an irreversible nature, where if it is damaged it will not be able to recover. The possibility of kidney damage is due to lack of maintenance of a healthy diet and lifestyle, so that in your 50s or even 30s you will suffer from chronic kidney failure.
Furthermore, the results of this research also succeeded in finding that 10 of the respondents had a high school-equivalent education (28%) and 25 people were university graduates or 72%. A person's level of education greatly influences changes in attitudes and behavior, the higher a person's level of education is expected to make it easier to absorb information and implement it in daily life so that it can increase the ability to utilize knowledge and skills in compliance with the health therapy being undertaken (Sari, 2012; Syamsiah, 2011). According to researchers' analysis, the more someone knows about their own needs and conditions, the more obedient that person will be and will do the best for themselves. Meanwhile, regarding body weight, researchers found that CKD patients had an average pre-HD1 body weight of 63.66 kg, pre-HD2 body weight of 64.99 kg, and an interdialytic weight gain of 3.2%. IDWG is an increase in fluid volume manifested by an increase in body weight during the interdialytic period (between two dialysis sessions).
According to Neumann (2013) the IDWG that can be tolerated by the body is ≤ 3% of dry weight. Lindberg (2010) explains that a weight gain of 1 kg is equivalent to 1 liter of water consumed by the patient. The recommended weight gain between hemodialysis sessions is between 2.5% - 3.5% of dry body weight to prevent the risk of cardiovascular problems. The tolerable weight gain between two hemodialysis sessions is 1.0 -1.5 kg. Meanwhile, Europe recommends IDWG of no more than 4%-4.5% of dry body weight (Vennegoor, 2008).

According to Neumann (2013) IDWG that can be tolerated by the body is no more than 3% of dry weight.

DISCUSSION

The results of this study are in accordance with related research conducted by Wahyuni (2017) regarding the relationship between characteristics, knowledge about sodium and fluid intake with interdialytic weight gain (IDWG) in chronic kidney failure sufferers undergoing hemodialysis from 74 CKD sufferers who have been undergoing hemodialysis for 2 months. routinely 2 times/week, with a dialysis duration of between 3-4 hours for each dialysis session. The average IDWG of respondents was 2.0014 kg ± 1.2537 kg, with a percentage increase of 3.569 ± 2.341% of dry body weight. The lowest IDWG is 0 kg and the highest is 5 kg or the lowest is 0% and the highest is 11.11%. .Respondents with IDWG >3% were 40 respondents (54.1%).

Based on the results of research by Wong (2017), it shows that there is an increased risk of death in respondents with IDWG ≥ 5.7% when compared to respondents with IDWG 2.5 – 3.99%. Likewise, the risk of being hospitalized due to excess fluid will increase in respondents with IDWG≥ 4% compared to IDWG 2.5 -3.99%. According to the researchers' analysis, in general the results of body weight with interdialytic weight gain are still within the normal value range even though they have almost reached the upper limit value, namely 3.5%, however there are several sources which also state that the normal IDWG value is below 5%. This depends on how the sufferer responds to these sources. It would be better if sufferers compared it with the clinical symptoms that sufferers feel when their body weight increases excessively or increases within normal levels.

The results of this research are in line with related research on the Self-Efficacy of Fluid Restriction on Interdialytic Weight Gain in Chronic Kidney Failure Patients in the Hemodialysis Room at Pasar Minggu Regional Hospital conducted by Priska and Herlina (2019). It was found that the average result of intradialysis weight gain in Kg was 2.188 with standard deviation 1.0044. As many as 95% believe that the average IDWG of respondents is 1,866 to 2,509. Meanwhile, regarding activities, researchers found that the majority of respondents were male, 21 people (60%). Wahyuni (2017) in his research stated that based on gender, 9 female respondents (33.33%) had IDWG ≤ 3% and 25 male respondents (53.20%) had IDWG ≤ 3%. The percentage of men with IDWG ≤3% is greater than women. This is because men, as the backbone of the family, are more motivated to maintain their quality of life. The results of this study are in accordance with related research conducted by Fazriansyah, Putra & Pringgotomo (2018) regarding the relationship between compliance with controlling fluid intake and the addition of Inter-Dialytic Weight Gain (IDWG) values in patients undergoing hemodialysis therapy at the Kotabaru Regional Hospital. most (66.7%) of the respondents were male and almost half (33.3%) of the respondents were female.

Men's total body water makes up 60% of their body weight, while women's total body water makes up 50% of their body weight. Men have a different body composition than women. Men have more muscle tissue than women who have more fat tissue. Fat is a substance that is free of water, so the less fat will result in a higher percentage of water in a person's body weight. Total body water will result in increased weight gain more quickly than the gain caused by calories. Related to this, in hemodialysis patients, weight gain between two times of dialysis in men is higher than in women (Worden V, 2007). This is in accordance with a study conducted by Brunstrom in Istanti (2011) that women need a smaller volume of water than men to have a satisfying effect on their thirst. Male respondents are the largest number of respondents with a good level of compliance. This is because men can be more firm in making decisions about their diet and do not have as much consideration. This is related to men having stability in maintaining their beliefs and behavior compared to women because it

is more difficult for women to maintain their behavior because it is influenced by many factors (Syamsiah, 2011). Meanwhile, regarding how long respondents underwent hemodialysis therapy which influenced compliance with fluid restrictions, researchers found that respondents had an average duration of hemodialysis of 2.1 years. A person suffering from end-stage chronic kidney failure must undergo lifelong kidney replacement therapy, and one of them is hemodialysis. Treatment that requires a long period of time will have effects on sufferers such as psychological stress. Suryaningsih (2010) stated that chronic kidney failure patients who have been undergoing hemodialysis for a long time tend to have lower levels of anxiety compared to patients who have just undergone hemodialysis. Patients who have been undergoing hemodialysis for a long time may already be in the acceptance phase.

The length of time undergoing hemodialysis is not a determining factor in the IDWG value. This is because the length of hemodialysis in patients varies, which also affects the IDWG of various patients. The length of time a person undergoes hemodialysis affects the level of knowledge regarding fluid restrictions and intradialysis weight control, compliance with fluid restrictions which will affect IDWG. However, this can also have the implication that the longer a patient undergoes hemodialysis, it does not guarantee that the patient understands and adheres to a diet limiting protein and salt fluids which can have an impact on the patient's health (Bayhakki & Hasneli, 2017). This is contrary to the opinion expressed by Sulistini (2013) who stated that the longer a patient undergoes hemodialysis, the more often they will be exposed to the side effects of hemodialysis, both acute and chronic, and interdialytic weight gain is one of these effects, so the length of hemodialysis is related to the addition of IDWG.

According to the researchers' analysis, the duration of hemodialysis can have an impact on two final outcomes, namely patient compliance and hopelessness. This depends on how the people closest to you provide motivation to chronic kidney failure sufferers so that they can maximize the therapy and limits given to return to health.

According to Neumann (2013) the IDWG that can be tolerated by the body is ≤ 3% of dry weight. Lindberg (2010) explains that a weight gain of 1 kg is equivalent to 1 liter of water consumed by the patient. The recommended weight gain between hemodialysis sessions is between 2.5% - 3.5% of dry body weight to prevent the risk of cardiovascular problems. The tolerable weight gain between two hemodialysis sessions is 1.0 -1.5 kg. Meanwhile, Europe recommends IDWG of no more than 4%-4.5% of dry body weight (Vennegoor, 2008). According to Neumann (2013) IDWG that can be tolerated by the body is no more than 3% of dry weight.

The results of this study are in accordance with related research conducted by Fazriansyah, Putra & Pringgotomo (2018) regarding the relationship between compliance with controlling fluid intake and the addition of Inter-Dialytic Weight Gain (IDWG) values in patients undergoing hemodialysis therapy at the Kotabaru Regional Hospital. Of the 24 respondents, a small portion (16.7%) of respondents were in the light addition category, the majority (70.8%) of respondents were in the moderate addition category and a small portion (12.5%) of respondents were in the heavy addition category.

Meanwhile, regarding the relationship between compliance with fluid restrictions and interdialytic weight gain in CKD patients on hemodialysis, the results of this study showed a relationship between compliance with fluid restrictions and the Inter-Dialytic Weight Gain (IDWG) value. The results of the Chi Square test obtained a value of $p = 0.021$, so it can be concluded that there is a difference. proportion of occurrences of changes in Inter-Dialytic Weight Gain (IDWG) values between patients who adhere and do not comply with fluid restrictions. From the results of the analysis, it was also obtained that OR = 4.886, meaning that patients who complied with limiting fluid intake had odds 4.886 times higher for an Inter-Dialytic Weight Gain (IDWG) value ≤ 3.5% (normal weight gain).

The results of this study are in accordance with related research conducted by Fazriansyah, Putra & Pringgotomo (2018) regarding the relationship between compliance with controlling fluid intake and the addition of Inter-Dialytic Weight Gain (IDWG) values in patients undergoing hemodialysis therapy at the Kotabaru Regional Hospital. Of the 24 respondents, almost all (87.5%) of the respondents were in the non-compliant category, a small portion (8.3%) of the respondents were in the compliant category, and a small portion (4.2%) of the respondents were in the moderately compliant category. The majority (70.8%) of respondents were in the moderate gain category, a small portion (16.7%) of respondents were in the light gain category, and a small portion (12.5%) of respondents were in the heavy gain category. There is a relationship between compliance with controlling fluid intake and increasing the Inter-Dialytic Weight Gain (IDWG) value in patients undergoing hemodialysis therapy in the Hemodialysis room at Kotabaru Regional Hospital in 2018. Interdialytic Body Weight Gain is closely related to the patient's fluid intake. Fluid restriction is one of the therapies given to patients with end-stage renal disease for prevention and therapy of comorbid conditions which can worsen the patient's condition. The amount of fluid prescribed for each day is different for each patient depending on kidney function, the presence of edema and the patient's urine output. Good fluid intake regulation can prevent excessive IDWG. Kapple & Massry (2004) recommend that the ideal fluid intake consumed by patients every day is 600 ml + urine output + extrarenal water losses. Six hundred ml is fluid lost every day, while extrarenal water losses include diarrhea, vomiting and nasogastric secretions.

Compliance is defined as a person's behavior in taking medication, following dietary recommendations and/or making lifestyle changes in accordance with recommendations from professional health workers (WHO, 2003 in Hartati, 2016). Each patient requires a different amount of time to improve their knowledge and attitudes. The longer a patient undergoes hemodialysis therapy, the more knowledge they will gain and can have a positive attitude towards compliance with a fluid diet. Meiistika (2017) Non-compliance in undergoing hemodialysis results in an increase in IDWG which then results in increased hospitalization and mortality. Denhaerynck, et al (2007) explained that non-compliance in fluid management will result in excessive IDWG between 10%-60%, with a prevalence of 30%-74%.

Adding an IDWG value that is too high can cause negative effects on the body, including hypotension, muscle cramps, shortness of breath, nausea and vomiting (Moissl et al, 2013). According to Suharyanto (2009), an increase in IDWG that exceeds 5% of dry body weight can cause complications such as hypertension, intradialysis hypotension, congestive heart failure. The chi square test showed that there was no significant relationship between gender and the size of IDWG (p=0.099). Researchers assume that patient compliance in controlling fluid intake is greatly influenced by knowledge and motivation factors within the patient himself, thus influencing the increase in Inter Dialytic Weight Gain (IDWG) and resulting in the patient's health status.

CONCLUSION

In accordance with the discussion of the results of research conducted on 35 respondents, namely adults suffering from Chronic Kidney Disease (CKD) who underwent Hemodialysis at Tzu Chi Hospital Jakarta who were included in the respondent inclusion criteria, it can be concluded as follows:

1. The description of the characteristics of the 35 respondents studied shows that the average age of the respondents was 53.83 years, 21 people were male (52.5%), 25 people were highly educated (71.4%), and the average age hemodialysis 2.1 years.
2. Compliance with fluid intake restrictions in sufferers of Chronic Kidney Disease on Hemodialysis at Tzu Chi Hospital Jakarta, most of the patients complied, as many as 20 people (57.2%).

3. The Interdialytic Weight Gains value for Chronic Kidney Disease on Hemodialysis sufferers at Tzu Chi Hospital Jakarta had a value of ≤ 3.5% for 15 people, which means the IDWG value was within reasonable or good limits.
4. There is a relationship between compliance with fluid intake restrictions and changes in Interdialytic Weight Gains in sufferers of Chronic Kidney Disease on Hemodialysis at Tzu Chi Hospital Jakarta (p=0.021).

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