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*Adherenceof Dietarymodification for patient receiving hemodialysis

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A B S T R A C T

Adherence to fluid and restriction, dietary and medication are important for adequate management of hemodialysis patient. The aim of this study was conducted to determine adherence to diet and fluid restriction in hemodialysis treatment individual and the affecting factor. Descriptive design study was conducted dialysis center in Sebha medical center, data was gathered by using prepared form, from March 18, 2019 to April 27, the total number of patients was 30, including 12 females and 18 males, then a discussion of renal structure and function and dialysis.

Keywords: Adherence, Dialysis, Dietary, Modification, Hemodialysis.

Introduction

Chronic renal failure is an irreversible and progressive renal dysfunction the eventually lead to end-stage renal disease (ESRD) "Akolu and Sulemanlar, 2005". End stage renal disease occurs when at leads 95% of normal kidney function has been lost. dialysis is type of medical treatment that remove the excess water and waste from the blood. The most common of dialysis is hemodialysis (HD), which is performed by a machine that connect through the patients vein to filter the blood, removing waste and excess fluid "Cristenses et al, 2002". Most hemodialysis patients receive dialysis at a center two or three times a week for up four hours per session. unlike healthy kidney function which occurs an continuous basis, individuals receiving hemodialysis are placed on stringent dietary and medical regiment to control the buildup of toxins and fluid in the blood "Rubin ,2007". The 2003 world health organization "WHO" report defines a adherence as a measure of the individual's behavioral change according to the recommendations of health care team regarding medication use, diet and lifestyle change "world health organization 2003". Over 485,000 people in the united states have chronic kidney disease, a progressive kidney disease that may lead to hemodialysis. "Matteson and Russel ,2010 ". most dialysis patient urinate very little or not at all, and therefore fluid restriction between treatments, treatment is very important. without urination fluid will build up in the body and cause excess fluid in the heart, lungs and ankles. Patients on dialysis need to get enough protein and adequate nutrition because they can become malnourished. This diet will help dialysis patient feel as good as possible. The dialysis diet controls the intake of fluid, protein, sodium, potassium and phosphorus. The amounts of these nutrient in the diet are based on blood levels of sodium, potassium, phosphorus,

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calcium, albumin and urea, these levels are measured before and immediately father a dialysis treatment "Mitch ,2007". Fluid restriction is based on the amount of urine output and weight gain between treatments "Sabote ,2001". Adherence is a major problem in patient with chronic kidney disease. patient can be non-adherent with different aspects of their treatment, which includes medication, treatment regimen and dietary and fluid restrictions. To minimize non-adherence, intervention need to focus on both patient factors and the extent to which relationship and system problem compromise the patient's ability to adhere to medication and treatment plan "Kammere et al, 2007". Determining the status of non-adherence to diet and fluid before and during HD and taking measures eliminate it are report to significantly increase the effectiveness of disciplinary team is required to ensure adherence of HD treatment. The nurse plays a key role in this team by ensuring adherence of the individuals to the treatment, and participating in their monitoring and evaluation, as they have maintained long term communication with HD patient "Kammerer et al, 2007, Kara, 2007". The nursing services provided at HD centers in authors country focus mostly on physical care. "Kara et al 2007".

Amis:

-To identify characteristic of hemodialysis patient most likely to Experience difficulty adhering to sodium restrictions associated with Their dietary regimen.

-Find out the main causes of kidney disease in its end stage.

-Contributing to be development of awareness and causes of kidney Failure and prevention methods.

-This study has been conducted to determine the hemodialysis treated Individuals adherence to diet and fluid restriction and the influencing Factors in sabah .

Research problem:

The problem is that kidney failure is a serious challenge for all countries, chronic kidney failure rates are high, and more than 500 million people in the world suffer from chronic kidney failure until 2011.

Material and method:

A descriptive design was conducted at Dialysis Department in Medical Hospital in Sebha City. Purposive sample of (30) patients who admitted to dialysis where accepted to participate in the study, who received dialysis sessions not less than one year, the data collection was carried out from then period 23th March 2019 to 27th April 2019. By using interview, all participants be fully aware of the aim and details of the study and reassured that any data pertaining to the deals confidential. Questionnaire was consisting of three parts: The first part includes demographical data concerning the respondent specific characteristic age, gender, education level, marital status and occupation. The second part extended to general information as smoking, chronic disease, number of dialysis session per week, while third part

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consist of (12) items related to patient adherence divided as the fallowing: (3) items for patient adherence to dietary counseling, (6) items related to water consumption, adherence to protein consumption assessed with (3) items, three liker rating was use never, sometime, always.

RESULTS

Table (1): Distribution of Patients According to the Demographic data of the sample

	Demographic data	frequency	percentage
Gender	Male	18	60%
	Female	12	40%
Age in years	10-19	4	13.3%
	20-29	1	3.3%
	30-39	7	23.3%
	40-49	6	20%
	50-59	3	10%
	60 above to 75	9	30%
Education Status	Illiterate	9	30%
	Primary school	2	6.6%
	Intermediate school	7	23.3%
	Secondary school	4	13.3%
	High education	8	26.6%
Occupation	Official work	16	53.3%
	Private work	0	0
	Retired	2	6.6%
	Housewives	8	26.6%
	student	4	13.35
Marital status	Single	9	30%
	Married	21	70%
	Widow	0	0
	Divorced	0	0

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Table (2): Distributionofthepatientsaccordingtothefamily HealthHistoryand Smoking.

Chronic Illness	Frequency	Percentage
Family History for Chronic Diseases	11	36.6%
Free of Family History for Chronic Diseases	10	33.3%
Smoker	2	6.6%
Non Smoker	7	23.3%

Table (3): Distribution of the patients According to the Chronic Disease.

Chronic Illness	Frequency	Percentage
Diabetes	4	13.3%
Hypertension	13	43.3%
Diabetes and Hypertension	5	16.6%
Free of diseases	4	13.3%
Congenital	4	13.3%

Table (4): Distribution of the Patients According to the Dialysis Session.

Number of Sessions \ Week	Frequency	Percentage
Four	3	10%
Three	23	76.6%
Two	4	13.3%
One	0	0
Total	**30**	**100**

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Table (5): Patients Adherence to Dietary Counseling.

Items	never		Sometime		always	
	F	%	F	%	F	%
Visit dietitian to modify diet	1	3.3%	19	63.3%	10	33.3%
Receive detailed instruction to follow dietary regimen from health personnel	1	3.3%	18	60%	11	36.65%
Use dietary supplement according to the physician advice	1	3.3%	15	50%	14	46.6%

Table (6): Patients Adherence to water Consumption.

Items	never		Some time		always	
	F	%	F	%	F	%
Perform many methods to decreases thirst feeling	2	6.6%	18	60%	10	33.3%
Drink a lot of water to control your	4	13.3%	17	56.6%	9	30%
thirst						
Drink a lot of water when exposed to hot weather	0	0	20	66.6%	10	33.3%
Calculate the amount of water which you consumed per day	6	20%	14	46.6%	10	33.3%
Use juice as proper alternative for water	7	23.3%	16	53.3%	7	23.3%
Consume a glass of water when taking medication	1	3.3%	25	83.3%	4	13.3%

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Table (7): Patients Adherence to Protein Consumption.

Items	Never		Some time		always	
	F	%	F	%	F	%
Consume a lot of proteins without limitation	8	26.6%	11	36.6%	11	36.6%
Believe that the proteins are harmful for person who receive dialysis	11	36.6%	9	30%	10	33.3%
Daily consumption of diary product	6	20%	15	50%	9	30%

Discussion:

Table (1) present that the 60 % of the sample were male, according to the age highest percentage 30% were between (60 above to 75) years group, while 30% of the sample were Illiterate, and 70% of sample married, while the highest percentage 53.3% were official work. The result in table (2) shows that the highest percentage of the sample 36.6% were with of family history for chronic disease while 23.3% of sample were no smoker, while results in table (3) presented that 43.3% of the sample were with hypertension. Results of comparative study show that hypertension prevalence in hemodialysis patient was 53.8%, coronary heart disease and diabetes are risk factor for hypertension. An effective hypertension therapeutic strategy in hemodialysis patient must include increase time of hemodialysis, strict control of weight and prevention and treatment of others cardiovascular risk factor "Garcia and Ceballos, 2004". The result in revealed that 76.6% of sample were receive three dialysis sessions per week, hemodialysis patient are asked to adhere to a very difficult treatment regimen consisting of fluid and diet restriction, many daily medication and usually three or four hours hemodialysis sessions three times each week "Morgan, 2000". Regarding to the dietitian guidance and counseling table (5) presented that the high percentage 63.3% of the sample sometime visit dietitian used modify, while 60% of them sometimes received detailed instruction to modify their regimen from health personnel. Early nutritional intervention is thought to play major role in the preservation of renal function and the overall wellbeing in the renal patient. In preparation for renal replacement therapy, a consultation with the renal nutritionist to

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establish a diet consistent with the existing diagnosis may increase the likelihood of reducing cardiovascular risk factors, preventing malnutrition and anemia and slowing the progression of renal disease, all of which can contribute to positive patient outcome "Moore et al, 2003". Table (6), show that the high percentage 83.3% of the sample sometime consume a glass of water taking medication, while 66.6% of the sample sometime drink a lot of water when exposed to hot weather and 60% of perform many methods to decrease thirst feeling. A descriptive correlation study carried out on 200 patients with renal failure and on hemodialysis, revealed that most of the patient 56% had non-adherence with fluid restrictions. Across-sectional descriptive, comparative and correlation study find that, poor compliance with fluid restriction was defined as intra dialysis weight gain >=2.5Kg "Fajardo, Gievara, and Gonzales, 2002". Patient across the united states who had on overage weight gain of at least 0.5 Kg above their end dialysis dry weight by time the hemodialysis treatment started. Patient with chronic kidney disease undergo hemodialysis treatment have similarities to heart failure patient in that both populations retain fluid frequently and have excessive high mortality. Remove of sodium and fluid is a predictor of mortality in hemodialysis patient, adequate fluid and sodium balance is crucial for management of the patient who receive hemodialysis "Ate et, 2001, Zaden et al, 2009". Table (7) presented that 50% of the sample sometime daily consumption of diary product while 36.6% of the sample never believe that the protein is harmful for person who receive dialysis. Before starting dialysis, a low protein diet consumed to limit the amount of waste products in the blood. When dialysis have been start diet will include more protein, getting the right amount of protein is important to overall health body needs right amount of protein for: building muscle, repairing tissue, fighting infection, protein–rich foods include: fresh meats, poultry (chicken and turkey), fish and other seafood, eggs or eggs whites dietitian will help to plan the right amount of each protein source for good health and strength "National Kidney Function, 2000".

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Conclusion:

According to the finding of the present study, most of the convenient sample of the study was male, within age group (60 above to 75) years .Illiterate, married, most of sample were with family history for chronic disease, suffer from hypertension not smoking, in addition, most of them received three dialysis session with three hours per week, they sometime visit dietitian and use dietary supplement according to physician advice with reference to water and electrolytes consumption and thirst management, most of the participants ignore how to decreases their thirst.

Recommendation:

The present study recommends that the dietitian should be consultant to plan renal diet and answer questions, using patient language, explain food frequency consumption, proper planning according to patient's socioeconomic status should be designed, in addition patient education provided with family involvement is an important element for promoting adherence among patient receiving dialysis.

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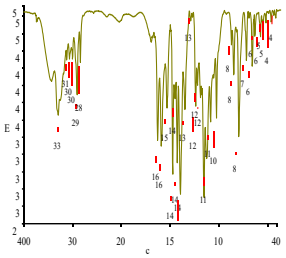

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