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Assessment of Patient with End Stage Renal Disease on Hemodialysis knowledge about Home-Self management regarding (fluid and diet) in Elmek Nimer University Hospital Centre 2014

A thesis submitted in partial fulfillment for the requirements of master degree in medical surgical nursing.

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الآية (80) من سورة الشعراء

Dedication

First and foremost, I thank to the Mighty Allah for helping me accomplish this work. I would also like to thank to my family, a special feeling of gratitude to my loving parents for their words of encouragement and push for tenacity that still ring in my ears. Special thanks to my dearest brother Shams ELdin Hamza for helping me to this study.

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To my friends…..Who shared with me .

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I couldn't afford to forget thanking all my patients and their families who happily participate in this study.

List of abbreviations

ESRD	End stage renal disease
GFR	Glomerular filtration rate
BUN	Blood urea nitrogen
ICU	Intensive care units
ARF	Acute renal failure
CRF	Chronic renal failure
PD	Protineal dialysis
HD	Hemodialysis
HDL	High density lipoprotein
DM	Diabetes malliets

Abstract

Back ground:

This study is conducted in Elmek Nimer university hospital from Jul_ 2014 November_2014, the main reason which initiated to this study is lack Of knowledge about ESRF patients and their family about fluid and diet Restriction and essential in reducing the sequel of health state deteriorate in Morbidity and mortality,

Objectives:

Assessment of the patient knowledge about home self-management regarding fluid and diet regimen in dialysis unit at Elmek Nimer university Hospital.

Methods:

This descriptive cross sectional study was conducted in Elmek Nimer, 102 patients were participated in this study, the data was collected by structured questionnaires it analyzed By statically program social science (SPSS).

Results:

The Majority of study group were male 65 patients (63.7%) their duration of hemodialysis was more than two years. Most of patient 100 Patient (98%) having two hemodialysis session per week, and most of them 95 patient (93.1%) having three hours duration of dialysis session, Most of The patients had sufficient knowledge about fluid and diet restriction.15 Patient 14.7 % of patients have a good knowledge about fluid over loading Signs. Half of patient 51 (50%) have a good compliance regarding dietary and fluid regimen and 102 (100%) of patient compliance about dialysis Session attends.

Conclusion:

Most of the patients have sufficient knowledge about fluid and diet Restriction. In case of dietary compliance some patients has incompliance About (content, frequency and habits)

Patient's knowledge was good about fluid over load signs but poor in Compliance fluid restriction. All patients were committed in hemodialysis Session.

Recommendations:

To improve the awareness of the patients about their disease, I recommend the Hospital administration to establish frequent health messages toward the Patients to improve their awareness toward the disease.

In whole the unit there is a need of nephrologist thus I recommend the Authorities of the hospital to bring nephrologist to follow-up and evaluate Health status of the patient. Also recommend that important of found nutritionist and psychotherapist.

ملخص البحث

خلفية عن الدراسة:

هذه الدراسة أجريت في مركز غسيل الكلي مستشفي المك نمر الجامعي في الفترة ما بين يوليو 2014 إلى نوفمبر 2014 اكبر سبب لاجراء هذه الدراسة هي قلة معرفة مرضى الفشل الكلوي وأسرهم حول نظام تقليل السوائل والنظام التغذوي وذالك لأهميته في تقليل نتائج تدهور الحالة الصحية والمرضية ونسبة الوفاة.

الهدف:

تقييم معرفة المرضى بالمعالجه المنزليه تجاه برنامج السوائل والغذاء فى وحدة غسيل الكلي بمركز مستشفى المك نمر الجامعي.

طريقة البحث:

هذه الدراسة تمت بالدراسة الوصفية 102 مريض شاركوا في هذه الدراسة، وتم جمع البيانات باستمارة استبيان ل 102 مريض وبعد تحليل البيانات من خلال برنامج التحليل الإحصائي spss.

النتائج:

وجد أن الغالبية من عينات الدراسه ذكور65 مريض (63.7%) قضوا طول فتره في الغسيل الدموي اكتر من سنتين، الغالبية العظمى من المرضى 100 مريض (98%) يغسلوا مرتين في الأسبوع. غالبيتهم 95 (93.1%) مريض يقضون فترة غسيل ثلاث ساعات في جلسة الغسيل.

الغالبية العظمى لديهم قدر كافي من المعرفه تجاه نظام تقليل السوائل والنظام التغذوي ،15مريض 14.7% من المرضى ذوى معرفه جيده حول علامات زيادة سوائل الجسم ،نصف المرضى51، 50% لديهم التزام جيد تجاه النظام التغذوي والسوائل،102مريض 100% من المرضى ملتزمين حول حضورهم جلسة الغسيل.

الخاتمة:

غالبية المرضى لديهم معرفه كافيه حول تقليل السوائل وبعض الاغذيه .في حالة الالتزام بالغذاء بعض المرضى غير ملتزمين حول (المحتوى- التكرار- والعادات)، معرفة المرضى جيدة حول معرفة علامات زيادة السوائل و لكن قليلى الالتزام بتقليل السوائل،كل المرضى ملتزمين بحضورهم جلسة الغسيل.

التوصيات:-

لتحسين وعي المرضى حول مرضهم أوصي إدارة المستشفى بإنشاء رسائل صحية متكررة للمرضى لتحسين وعيهم نحو المرض. عموماً الوحدة محتاجة لأخصائي كلى لذا أوصي سلطة المستشفى بإحضار أخصائي كلى لمتابعة وتقييم الحالة الصحية للمرضى، وأيضاً أهمية وجود أخصائي تغذية ومعالج نفسي.

Contents

List of tables

List of figures

Chapter one

1- Introduction and literature review

2-Objectives

3- Justification

Introduction and literature review

Backround:

Chronic renal failure, or ESRD, is a progressive, irreversible deterioration in renal function in which the body's ability to maintain metabolic and fluid and electrolyte balance fails, resulting in uremia or azotemia. The incidence of ESRD has increased by almost 8% per year for the past 5 years. In the United States, more than 280,000 patients with chronic renal failure (65%) are receiving hemodialysis; more than 120,000 (28%) have functioning renal transplants, and more than 24,000 (7%) are receiving peritoneal dialysis. [1]

The hallmark of acute renal failure is a decreased glomerular filtration rate (GFR), reflected by an accumulation of blood urea nitrogen (BUN) and serum creatinine—a condition termed azotemia. Serum creatinine is the better marker because increases in serum creatinine are relatively unaffected by non-renal mechanisms. Changes in serum creatinine levels that suggest acute renal failure include:

1- An increase of 0.5 mg/dL or a doubling of ceriatinin from baseline in patients with a baseline creatinine level of less than 2 mg/dL [2]

2- An increase of 1 mg/dL in patients with a baseline creatinine level greater than 2 Mg/dL [3]

A decrease in measured creatinine clearance of more than 25%1Urine output patterns in acute renal failure can manifest as oliguria (<400 mL/day), non-oliguria (>400 mL/day), or anuria (<50 mL/day). Categorization of Chronic renal failure is a slow, progressive, irreversible deterioration in renal function that results in the kidney’s inability to eliminate waste products and maintain fluid and electrolyte balance. Ultimately, it leads to end-stage renal disease (ESRD) and the need for renal replacement therapy or renal transplantation to sustain life. [3]

The final stage of chronic renal failure is ESRD. It is characterized by a residual renal function of less than15% of normal. At this point, all the normal regulatory, excretory, and hormonal functions of the kidney are severely impaired. ESRD is evidenced by marked elevations in BUN and serum creatinine levels, anemia, electrolyte imbalances (i.e., hypocalcaemia, hyperkalemia, hypophosphatemia), and fluid overload. Usually the patient is oliguria, with urine osmolality similar to plasma osmolality. Uremic symptoms are manifested and include nausea, vomiting, anorexia, altered sensorial, weakness, and fatigue. If treatment with dialysis or transplantation is not initiated, the patient will die [2]

Hemodialysis is the most commonly used method of dialysis: more than 300,000 Americans currently receive hemodialysis. It is used for patients who are acutely ill and require short-term dialysis (days to weeks) and for patients with ESRD who require long-term or permanent therapy. Currently there are more than 300,000 dialysis and renal transplant recipients in the United States, among patients receiving dialysis, incidence rates are 43% higher in men than in women, and are higher with increasing age. [1] These differences in incidence rates are important to keep in mind when considering patient risk factors and populations to which increased health education regarding prevention should be targeted. The causes of chronic renal failure are numerous but diabetes mellitus and hypertension are by far the two most common, accounting for more than 30%and 20% of cases of ESRD, respectively. Other causes include glomerulonephritis (both primary and secondary to systemic diseases), interstitial nephritis, congenital malformations, genetic disorders, neoplasm, hepato renal syndrome, obstructive uropathy and micro angiopathic etiologies such as scleroderma and other embolic disease. [2] Acute renal failure occurs in 5% of hospitalized patients and accounts for as much as 20% of the patients treated in intensive care units (ICUs). In hospitalized patients with acute renal failure, the mortality rate exceeds 40%to 50%; in ICU patients who have multisystem organ failure and require dialysis, the mortality rate increases

to70% to 80%.These discouraging mortality rates have not changed in the last three decades despite vanes in technology and dialysis. [2]

The causes of CRF in Sudan are chronic glomerulonephritis, obstructive nephropathy (stone disease), hypertension and diabetes mellitus in that order [1].

The main cause of CRF in Sweden are chronic glomerulonephritis, diabetes mellitus and chronic pyelonephritis. [3]. the regimented lifestyle that frequent dialysis treatments and restrictions in food and fluid intake impose is often demoralizing to the patient and family.

Assessment helps identify the learning needs of the patient and family members. In many cases, the patient is home before learning needs and readiness to learn can be thoroughly evaluated; therefore, hospital-based nurses, dialysis staff, and home care nurses must work together to provide appropriate teaching that meets the patient's and family's changing needs and readiness to learn. [2]. In addition, many patients with ESRD have depressed mentation, a shortened attention span, a decreased level of concentration, and altered perceptual states. Therefore, teaching must occur in brief, 10- to15-minute sessions, with time added for clarification, repetition, reinforcement, and questions from the patient and family. The nurse needs to convey a nonjudgmental attitude to enable the patient and family to discuss options and their feelings about those options. Team conferences are helpful for sharing information and providing every team member the opportunity to discuss the needs of the patient and family.HCareCheckli Encouragement: Patients, families, and staff need encouragement to adopt a positive attitude toward rehabilitation. [3]

Education:

Patients need to understand there is ease. They need to learn strategies for successful adaptation to dialysis and how to maximize functional status, among

many other subjects. Parents, staff, and employers require education about the many positive life options of dialysis patients.

Exercise:

Exercise is critical to rehabilitation, just as with heart disease. Many levels of activity to fit the different abilities of renal patients are helpful, from vigorous work outs to stretching exercises. [2]

Anatomy and physiology of human kidney:

The kidneys are a pair of bean-shaped, brownish-red Structures located retroperitoneal. On the posterior wall of the abdomen— From the 12th thoracic vertebra to the third lumbar vertebra in the adult. The average adult kidney weighs approximately 113 to 170 g. And is 10 to12cm long, 6 cm wide, and 2.5 cm thick (Porth & Matfin, 2009).

The renal parenchyma is divided into two parts: the cortex and the medulla. The medulla is the inner portion of the kidney It contains the loops of Henle, the vasa recta, and the collecting ducts of the juxta medullary nephrons. The collecting Ducts from both the juxta medullary and the cortical Nephrons connect to the renal pyramids; each kidney contains approximately 8 to 18 pyramids. [4]The pyramids drain into minor calices, which drain into major calices that open directly into the renal pelvis.

The renal pelvis is the beginning of the collecting system and is composed of structures that are designed to collect and transport urine.

The cortex is located from the center of the kidney. It contains the nephrons (the functional Units of the kidney). [4]

Blood Supply to the Kidneys:

The hilum is the concave portion of the kidney through which the renal artery enters and the ureters and renal vein Exit. The kidneys receive 20% to 25% of the total cardiac Output, The renal artery (arising from the abdominal aorta)

divides into Smaller and smaller vessels, eventually forming the afferent Arterioles. Each afferent arteriole branches to form a Glomerulus**,** which is the capillary bed responsible for Glomerular filtration. Blood leaves the glomerulus through the efferent arteriole and flows back to the inferior vena Cava through a network of capillaries and veins. [5]

Nephrons:

Each kidney has 1 million nephrons that are located within the renal parenchyma and are responsible for the initial formation of urine. The large number of nephrons allows for adequate renal function even if the opposite kidney is damaged or becomes nonfunctional. If the total number of functioning Nephrons is less than 20% of normal, renal replacement Therapy needs to be considered. [4]

Functions of the Kidney:

Urine formation, Excretion of waste products, Regulation of electrolytes, Regulation of acid–base balance, Control of water balance, Control of blood pressure, Renal clearance, Regulation of red blood cell production Synthesis of vitamin D to active form, Secretion of prostaglandins and Regulates calcium and phosphorus balance. [5]

RENAL FAILURE:

Identification:

Normally, your kidneys perform their job flawlessly. But sometimes, the kidneys lose their ability to filter fluids and waste, causing dangerous levels of these substances to accumulate in your body. This condition is known as kidney (renal) failure and without treatment, the buildup of toxins, extra fluid and dangerous levels of minerals in your blood will eventually cause death. The following information addresses the most common questions about kidney failure and serves as a supplement to the discussion that you have with your urologist. [4]

What Caused of Kidneys failure?

Sometimes we just don't know but there are several reasons the kidney may not work. The two most common causes are:

Diabetes (Sugar in the blood), Hypertension (High Blood pressure) these both affect the blood vessels slowly over time and cause damage to the nephrons or the filters of the kidneys.

Other causes: Infections that affect the nephrons, Birth defects – these can cause blockages of the urine flow that cause damage to the kidney. And Trauma- Caused by accidents or from a medication or poison ingested or inhaled into the body. [4]

Pathophysiology:

Renal failure results when the kidneys cannot remove the body's metabolic wastes or perform their regulatory functions. The substances normally eliminated in the urine accumulate in the body fluids as a result of impaired renal excretion, Affecting endocrine and metabolic functions as well as fluid, electrolyte, and acid–base disturbances. Renal failure is a systemic disease and is a final common pathway of many different kidney and urinary tract diseases. Each year, the number of deaths from irreversible renal failure increases (USRDS, 2007). [4]

How is renal failure diagnosed?

In addition to a physical examination and complete medical history, diagnostic procedures for renal failure may include the following:

Blood tests. Blood tests will determine blood cell counts, electrolyte levels, and kidney function, Urine tests, renal ultrasound (also called sonographer) . The test is use to determine the size and shape of the kidney, and to detect a mass, kidney stone, cyst, or other obstruction or abnormalities, Kidney biopsy Computed tomography scan (also called a CT or CAT scan). [6]

STAGES OF KIDNEY DISEASE

Stage	Description	Glomerular Filtration Rate
At increased risk	Risk factors for kidney disease (e.g., diabetes, high blood pressure, family history, older age, etc.)	(GFR) More than90
1	Kidney damage (protein in the urine) and normal filtration rate.	More than 90
2	Kidney damage and mild decrease in filtration rate	60 to 89
3	Moderate decrease in filtration rate	30 to 59
4	Severe decrease in filtration rate	15 to 29
5	Kidney failure (dialysis or kidney transplant needed)	Less than 15

[5].

Type of renal failure:

Acute renal failure:

Acute renal failure (ARF) is a rapid loss of renal function due to damage to the kidneys. Depending on the duration and severity of ARF, a wide range of potentially life-threatening metabolic complications can occur, including metabolic acidosis as well as fluid and electrolyte imbalances .ARF is a 50% or greater increase in serum creatinine above baseline (normal creatinine is less than 1.0 mg/dL)(Best & Counselman, 2008). Urine volume may be norm Possible changes

include oliguria(less than 500 mL/day), no oliguria (greater than800 mL/day), or anuria (less than 50 mL/day) (Counts, 2008). [4].

Categories of Acute Renal Failure:

The major categories of ARF are pre-renal (hypo perfusion of kidney), intra-renal (actual damage to kidney tissue), and post renal (obstruction to urine flow).

Phases of Acute Renal Failure:

There are four phases of ARF: initiation, oliguria, diuresis, and recovery

Clinical Manifestations:

Ill and lethargic. Drowsiness, headache, muscle twitching , and seizures. [4].

Chronic Renal Failure (End-Stage Renal Disease):

When a patient has sustained enough kidney damage to require renal replacement therapy on a permanent basis, the patient has moved into the fifth or final stage of CKD,

Clinical Manifestations:

Patients complain of severe pain and discomfort. Restless leg syndrome and burning feet can occur in the early stage of uremic peripheral neuropathy (Phillips &Ryr, 2005; Slack & Landis, 2006). [4].

Complications:

Potential complications of chronic renal failure that concern the nurse and necessitate a collaborative approach to care include the following:

Hyperkalemia ,Pericarditis, pericardial effusion, and pericardial tamponed due to retention of uremic waste products and inadequate dialysis ,Hypertension ,Anemia, And Bone disease and metastatic and vascular calcifications [7].

What is the treatment for acute and chronic renal failure?

Specific treatment for renal failure will be determined by your doctor based on:

Your age, overall health, and medical history, Extent of the disease, Type of disease (acute or chronic), Underlying cause of the disease, your tolerance for

specific medications, procedures, or therapies, Expectations for the course of the disease [7].

Treatment may include:

Hospitalization, Administration of intravenous (IV) fluids in large volumes (to replace depleted blood volume), Diuretic therapy or medications (to increase urine output).Close monitoring of important electrolytes such as potassium, sodium, and calcium, Medications (to control blood pressure), Specific diet requirements, In some cases, patients may develop severe electrolyte disturbances and toxic levels of certain waste products normally eliminated by the kidneys. Patients may also develop fluid overload. Dialysis may be indicated in these cases.

Treatment of chronic renal failure depends on the degree of kidney function that remains. Treatment may include:

Medications (to help with growth, prevent bone density loss, and/or to treat anemia), Diuretic therapy or medications (to increase urine output), Specific diet restrictions or modifications, Dialysis, and Kidney transplantation [7].

Dialysis:

TREATMENT OPTIONS:

PERITONEAL DIALYSIS (PD):

PD uses part of the body to clean your blood. The peritoneum is a membrane that lines the abdominal cavity inside your belly. It is like a bag, holding the internal organs.

To do PD, this bag is filled up with a special fluid called “dialysate” (dye-al-i-sate). Wastes and extra fluid in the blood slowly flow into the dialysate.

After a few hours, the dialysate has all the wastes and fluid it can hold so it is drained out. Clean dialysate is then put back in.

Putting the dialysate in, letting it sit for a few hours, and then draining is called an “exchange.” [7].

TREATMENT OPTIONS: HEMODIALYSIS:

Hemodialysis is the most common therapy, or treatment for patients with kidney failure. Hemodialysis can take place in your home or more commonly in a dialysis center.

Hemodialysis means "to clean the blood." It is the process where your blood is slowly withdrawn from the body and circulated through a machine. The machine is equipped with an "artificial kidney" or a dialyzer. This machine is designed to remove toxins and excess water, from the body. In a person without kidney disease the kidneys work to assist in removing these toxins by being urinated out of the body. The body is slowly cleansed over a 3-4 hour period 3 times a week [7].

ACCESS:

There are 3 types of accesses:

Fistula - One of your veins is reconnected to an artery, allowing greater blood flow through the vein. Because it is your own vein it often last longer and may have fewer problems than the other two types: Graft – An artificial tube is inserted just under the skin and is connected at one end to an artery and the other end to a vein. Sometimes this access requires more maintenance and does include an increased risk of clotting. And Catheter – Sometimes used for temporary access, this is a long, two sided tube inserted through the skin and into a vein. [5].

The table below contains more basic information on each access:

Catheter	Graft	Fistula
A catheter is a narrow flexible tube that is inserted into a large vein in the neck, groin or chest. The chest is the most common. There are two tubes exiting your skin. They will be used to remove blood from your body. Catheters are ready immediately after placement. It is not the recommended access for long-term dialysis due to frequent infection.	Created surgically by attaching synthetic tubing to an artery at one end & vein at the other. Ready for use in 2 to 3 weeks. Some may be ready 1 day after surgery. Usually placed in the arm, but the leg can also be used. Requires needles to access graft.	Created by surgically connecting an artery to a vein. This is the access of preference. Usually takes 6-12 weeks after surgery before it is ready to be used (a catheter may be needed until then.) Is usually placed in the arm Requires needles to access fistula Lower risk for infection Lower risk for clotting Better performance Longer lasting Can be used for many years Daily exercises (squeezing a ball) are required to enhance maturation of the new fistula.

[5].

End-Stage Renal Disease Nutritional Considerations. Nutrition-related concerns include maintenance of acceptable weight and serum proteins (e.g., albumin), prevention of renal osteo-dystrophy, and reduction of cardiovascular risk.

Weight Maintenance and Protein Requirements:

Protein needs are higher in patients with ESRD due to losses that occur during dialysis. The recommended dietary protein intake for clinically stable maintenance hemodialysis patients is 1.2 g/kg body weight/d, and 1.2 -1.3 g/kg body weight/d for individuals on peritoneal dialysis, 50% of which should come from sources high in biological value [8].

Nutritional status should be assessed, and every patient with ESRD should receive a diet plan. ESRD patients on dialysis may spontaneously reduce protein and calorie intake as a result of uremic toxins, elevations in lepton and other cytokines, and delayed gastric emptying. [9].

The average energy intake of patients with ESRD is lower than the recommended 30 to 35 kcal/kg,11 and 50% of patients reveal evidence of malnutrition .[10]. To prevent malnutrition-related morbidity and mortality, ESRD patients on dialysis should have periodic nutrition screening, consisting of laboratory measures (e.g., albumin), comparison of initial weight with both usual body weight and percent of ideal body weight, subjective global assessment, and dietary interviews with review of food diaries. Nutrition counseling should be intensive initially and provided every 1 or 2 months thereafter. If nutrient intake appears inadequate, malnutrition is apparent or adverse events or illnesses threaten nutritional status, counseling should be increased. If protein-calorie needs cannot be met with the usual diet, patients should be offered dietary supplements or, if necessary, tube feeding or parenteral nutrition to approximate protein and calorie requirements. [8].

Sodium and Potassium Balance:

ESRD patients should avoid high-sodium diets. Hypertension in dialysis patients is largely attributed to positive sodium balance and volume expansion [11]. While many patients on dialysis can effectively control blood pressure without drugs on a low-sodium (2g) diet and a low-sodium (130 mmol) dialysate, [12]. .Current practice is such that almost 70% of dialysis patients require antihypertensive medications. Although many patients may not achieve a therapeutic degree of sodium restriction, those who do can effectively control blood pressure and reverse left ventricular hypertrophy. [13]. A high-potassium diet is normally desirable to control blood pressure and reduce risk for stroke; however, individuals with ESRD on hemodialysis cannot tolerate this diet because they are unable to excrete potassium. Therefore, ESRD patients may need to avoid such foods as bananas, melon, legumes, potatoes, tomatoes, pumpkin, winter squash, sweet potato, spinach, orange juice, milk, and bran cereal to prevent life-threatening hyperkalemia-induced arrhythmia. Evidence indicates that the vast majority of patients comply with potassium restriction.

Phosphorus:

Elevated blood phosphorus concentrations are associated with increased mortality in ESRD patients, [13]. and increase the risk for cardiovascular events, at least in part by contributing to vascular calcification. [14] Excess phosphorus also causes secondary hyperparathyroidism, triggering the release of calcium from the bone matrix, and osteo-dystrophy. [10] Management of hypophosphatemia and renal osteo-dystrophy has improved with phosphate binders, particularly sevelamer hydrochloride (Rena gel), which also helps prevent hyperkalemia-related vascular calcification. [15] However, certain factors continue to confound adequate control of phosphorus levels. These include covert phosphate intake from processed foods. [16]

Treatment with high doses of vitamin D analogues , and the high protein needs of ESRD patients. Protein intake over 50 grams/day causes positive phosphate balance, in spite of phosphate binder therapy. [11, 17]

Micronutrient Supplements:

Micronutrient supplements are essential for ESRD patients. Individuals on dialysis commonly suffer from deficiencies of vitamin C, foliate, vitamin B6, calcium, vitamin D, iron, zinc, and possibly selenium, which can contribute to an antioxidant-deficient state. [18] The National Kidney Foundation clinical practice guidelines for nutrition in chronic renal failure suggest that patients achieve 100% of the Dietary Reference Intakes (DRI) for vitamins A, C, E, K, thiamin (B1), riboflavin (B2), pyridoxine (B6), vitamin B12, and folic acid, as well as 100% of the DRI for copper and zinc As a result of restricted intake of many foods and losses of water-soluble vitamins during dialysis [8], patients are usually given specially formulated vitamins. Intravenous forms of vitamin D analogues and iron are typically given to patients. While oral iron supplements may not be needed, oral vitamin D (ergocalciferol) may be beneficial. Certain other dietary supplements may be helpful. Supplementation with L-carnitine has been approved by the U.S. Food and Drug Administration to treat carnitine depletion in small studies L-carnitine has also been found to improve lipid metabolism, protein nutrition, antioxidant status, and anemia. [17]

However, some large studies have not confirmed these findings. Therefore, inadequate evidence exists to support the routine use of carnitine in patients who do not reveal signs of deficiency [8] Both vitamin C (250 mg/d) and vitamin E (400 IU/d) have proven effective in some patients for treating painful muscle cramps, and they provide a less toxic alternative to quinine therapy [16] However, additional clinical trials are required before these can be used as standard therapy...

Saturated Fat and Cholesterol:

Dialysis patients should follow a diet low in saturated fat and cholesterol. These patients are considered the group at greatest risk for development of coronary artery disease. They often have increases in serum triglycerides and low high-density lipoprotein (HDL) cholesterol. [19] Although they must eat a relatively high-calorie diet to spare protein, patients on dialysis should avoid foods that raise triglycerides and cholesterol concentrations.

What to Tell the Family:

End-stage renal disease is often preventable with the proper control of blood pressure, blood lipids, and blood glucose, in combination with appropriate medications. For patients who have progressed to the need for dialysis, morbidity and mortality can be reduced and quality of life enhanced through adherence to an appropriate dietary and medical regimen.

Orders:

Gram sodium, 2-gram potassium, phosphate-restricted diet, low in saturated fat and cholesterol.

Nutrition Consultation: To assess calorie and protein requirements, and instruct patient in above dietary recommendations .B-complex with small doses of vitamin C, 1tablet daily by mouth. Consider supplemental ergocalciferol or cholecalciferol. A long with regular physical activity [19]

Fluid control for those on hemodialysis:

The goal of fluid restriction is to help you feel comfortable before, during and after your dialysis sessions. Even though dialysis gets rid of excess fluid and waste in the body, it is not as effective as healthy kidneys. Most people on hemodialysis get treatments three times a week for about three or more hours at a time. This means, in the days between your dialysis treatments, your body holds on to excess fluid and waste your kidneys cannot remove. Going over your

recommended fluid allowance can lead to too much fluid building up in your body between treatments. This build up causes swelling and increases your blood pressure, which makes your heart work harder.

Too much fluid can build up in the lungs, making it difficult for you to breathe Hemodialysis removes fluid as the blood is filtered through the dialysis machine. However, there is a limit on how much fluid can be safely removed during a dialysis session. If you exceed your fluid allowance, more fluid must be removed. Your body may not be used to having so much fluid removed at once. Some people experience muscle cramping during dialysis when they gain too much fluid weight. Taking out a lot of fluid can also cause a drop in blood pressure, which can leave you feeling nauseated, dizzy and weak after the treatment. Sometimes, an extra dialysis session may be required to remove all the extra fluid.

How is my fluid restriction determined?

Fluid restriction may vary for each individual patient. Factors such as weight gain between treatments, urine output and swelling are considered. If you are on hemodialysis, your weight is recorded before and after your dialysis session. Your nurse uses weight changes to help determine how much fluid to remove during dialysis. If you are on peritoneal dialysis, your nurse will have you record your weight every day. Sudden weight gain may mean you are drinking too much fluid. Your dietitian will coach you on individual goals for your fluid intake

What are the complications associated with too much fluid?

For dialysis patients, the complications of excess fluid are:

High blood pressure a sudden drop to low blood pressure (generally occurs during hemodialysis) shortness of breath (and in some instances, fluid in the lungs) heart problems, which can include a fast pulse, weakened heart muscles and an enlarged heart.

Exercise and fluid intake:

Before you start an exercise program, let your doctor and health care team know. Exercise may change your fluid requirements, especially if you are exercising and perspiring heavily. Your dietitian can coach you on how much fluid to drink. Talk to your dietitian before making changes in your fluid intake.

Tips for managing your thirst:

Your dietitian—as well as fellow patients—can give you many helpful hints to manage your thirst. Here are some tips to get you started:

Salty and spicy foods make you thirsty. To help control thirst, your dietitian will recommend that you limit the amount of sodium and spicy foods in your diet.

Be aware of hidden fluids in foods. Your dietitian will provide you with guidelines to help you count your fluid intake. Fluid isn't just what you drink; it's also in what you eat. Your dietitian will suggest limiting foods with high water content, such as: gelatin, watermelon, soup, gravy and frozen treats like Popsicles TM and ice cream.

Stay cool. Keeping cool will help reduce your thirst, especially in warmer weather. Try drinking cold liquids instead of hot beverages. And, if you're thirsty between meals, try snacking on approved vegetables and fruits that are ice cold.

Sip your beverages. Sipping will let you savor the liquid longer. Use small cups or glasses for your beverages.

Try ice. Many patients find that ice is more satisfying than liquids. Try freezing your allotted amount of water into an ice tray. You can also try freezing approved fruit juices in ice trays for a special treat. Remember to include the ice you consume when tracking your fluid intake.

Take your medicines with your meal, if possible. Try swallowing pills with applesauce instead of liquids. (Check with your doctor before changing the times you take medications.

Battle dry mouth. Dry mouth can be uncomfortable. Instead of drinking fluid to refresh your mouth, try using mouthwash or brushing your teeth. Sucking on hard candy or a wedge of lemon or lime will also help.

If you have diabetes, maintain good blood glucose levels. High blood glucose levels will increase your thirst. Managing your diabetes by following your doctor and dietitian's recommendations will help you manage your thirst.

Restricting fluids isn't easy, but if you get tips from your dietitian and ask other patients what they do, you may find it isn't as difficult as you thought. The reward is you will feel better by preventing uncomfortable treatments, cramping and blood pressure fluctuations and stay healthier [20]

Nursing care for hemodialysis patient:

Pre dialysis care:

Assess vital sign as baseline information to help evaluate the effects of hemodialysis weigh and record patient's weight.

Assess vascular access site for palpable pulsation or vibration and for signs of inflammation. Absence of pulsation/vibration should be reported to doctors and dialysis can no longer be done in the assessed access site.

During hemodialysis:

-Place patient in supine /trendelenburg's position as necessary.

-Avoid contamination of access site use aseptic technique.

-Monitor alarms of the machine.

-Monitor vital sings.

-Administer IV solution (as indicated).

No procedure should be done on the extremities with vascular access site to avoid damage of blood vessels leading to the failure of the arterio-venous fistula.

Post dialysis care:

Assess and document vital signs, weight and vascular access site condition rapid fluid and solute removal during dialysis may lead to hypotension, cardiopulmonary changes and weight loss assess client general condition for dialysis disequilibrium rapid changes in BUN (Blood Urea Nitrogen), pH and electrolyte level during dialysis may lead to cerebral edema and increase intracranial pressure assess for bleeding at the access site heparinization during dialysis increase the risk of bleeding provide psychological support; listen actively, address concerns and explain about the dialysis. (www.nursing.help.come).

OBJECTIVES:

General objectives:

To assessment of patient knowledge about home self-management regarding fluid and diet in Elmek Nimer university hospital center.

Specific objectives:

- To identify patient knowledge about diet (content. Frequency and habit**).**
- To identify patient knowledge about fluid (determinant – compliance- and sign of over loud).
- To determine the level of compliance (fluid and diet constriction- and dialysis Attend)

Justification

- Effective Teaching of ESRF patients and their family about fluid and diet restriction is essential in reducing the sequel of health state deteriorate – morbidity and mortality. Assessment of ESRF patients and their family knowledge is helps identify the learning needs of the patient and family to advanced knowledge and information for improving their knowledge about fluid and diet restriction.
- Most of hemodialysis patient in Elmek Nimer hospital complaining from signs of fluid overload and health state deteriorate.

Chapter two

2. Materials and Methods

Methodology

Study design:

This is a descriptive- cross-sectional hospital based study, was done during the period from Jul 2014-november 2014.

Study area:

The study was done in Elmek Nimer university hospital hemodialysis center the hospital locates beside Shendi teaching hospital and Shendi locality, it was Established in 2002 and contains the following departments:-

Medicine department, Surgery department, Obstetric department, ENT, NICU, ICU CCU Ophthalmic, Dental care, Major and minor theater, Endoscopy, Laboratory, Blood bank pharmacy, Referral clinic, Renal unit, and Chemo- radiotherapy Department

Renal unit:

This department established in 2006, with one consultant, three medical officers, and four trainees nursing and, the unit was working 1-2 session /day but now there is 3-4 session/day.

The unit contains 2 units:

1. Engineering unit.
2. Functioning unit.

The functioning unite there is 12 machine negative serology and one machine HCV positive.

Medical staffs of the unit:

- Four general medical assistance.
- Fifteen nurse___2 male and 13 female during the study there were 108 patients, 67 male, 37 female, and six patients newly discovered.

Study duration:

From July 2014 to November 2014

Study population:

All patients receiving hemodialysis in Elmek Nimer university hospital Hemodialysis center.

Sample size and selection:

This study fulfilled with 102 patients that receiving hemodialysis in Elmek Nimer university hospital center.

Study techniques:

Study techniques were collected by questionnaire, literature review, and Interview with the patients and general observation of the unit.

Data analysis and statistical method:

The data was analyzed using statistical package for social science (SPSS).

Chapter three

Results

Results

This is a descriptive- cross-sectional hospital base study that enrolled 102 Sudanese patients with ESRD conducted at Elmek Nimer university hospital Hemodialysis center.

Study group characteristic:

The study showed that 39 patient`s (38.2%) their age over 51years, 28 patient's (27.5%) their age between (29-39 years), 25 patient's (24.5%) their age between (40-50 years), and 10 patient's (9.8%) their age between (18-28 years) .table [1].

The study showed those 65 patients (63.7%) of group study male, and 37 patients (36.3%) female. Table [2]-Figure [1].

This study showed that 75 patients (73.5%) ware married 15 patients (14. 7%) Are single, 7 patients (6.9%) widowed, 4 patients (3.9%) ware separated and one Patient (1.0%) divorced. Table [3].

The study showed that 31 patients (3 0.4%) from east of Shendi, 25 patients (24.5%) from Shendi, 20 patients (19.6%) from north of Shendi, 17 patients (16.7%) from south of Shendi, and 9 patients (8.8%) west of Shendi . Table [4] .

The study showed 45 patients (44.1%) of study group unemployment, 32 patients (31.4%) house wife, 13 patients (12.7%) employee, and 12 patients (11.8%) free worker. Table [5], Figure- [2].

The study showed that 39 patients (38.2%) education level was primary school, 25 patients (24.5%) are illiterate, 23 patients (22.5%) ware secondary school Level , 9 patients (8.8%) have Khalwa, and 6 patients (5.9%) are university Graduate. Table [6].

Commitment of patient with dialysis regimented:

The study showed those 53 patients (52%) on hemodialysis for more than 2 years, 23 patients (22.5%) from 1-2 years, 15 patients (14.7%) less than 6 month, and11 patients (10.8%) from 6 month - one year .Table [7].

The study showed that 100 patients (98%) are attending twice per week and two patients (2%) attending three time per week. Table [8]-Figure-[3].

The study showed that 95 patients (93.1%) spend about 3 hours in session., four patients (3.9%) spend about 2 hours in session, and three patients (2.9%) spend 4 hours in session . table [9].

The study showed that 98 patients (96.1%)of study group understand that Hemodialysis is used to remove fluid and uremic waste products from the body when the kidneys cannot do it, three patients (2.9%) of them understand therapy replaces normal kidney function, and one patient (1%) understand Washout waste products using machine .table [10].

The study showed that 63 patients (6 1.8%) of study group unknown their etiology of ESRD, 35 patients (3 4.3%) due to hypertension, and four patients (3.9%) due to DM table-[11].

Dietary and fluid management:

The study showed that 52 patients (51%) not eat chees, tuna, or olive**,** and 50 patients (49 %) sometimes eat chees, tuna, or olive. Table [12].

The study showed that 95 patients (93.1 %) of study group sometimes eat red meat ,eggs ,beans nuts, fish ,or chicken, 6 patients(5.9 %) not eat it, and one patient (1 %) eat it every day. Table [13].

The study showed that 80 patients (78.4 %) of study group sometimes eat fruits, vegetables or berries,16 patients (15.7%) not eat fruits, vegetables or berries, and 6 patients (5.9 %) every day was eat fruits, vegetables or berries. Table [14].

The study showed that 46 patients (45.1%) have sufficient knowledge about signs of fluid overload, 41 patients (40.2 %) have poor knowledge, and15 patients (14.7 %) ware knowledgeable about signs of fluid overload. Table-[15].

This study showed that 47 patients (46.1%) Taken fluid freely, 27 patients (26.5%) Taken fluid According to their doctor/nurse order, 27 patients (26.5%) Taken fluid according to their weight , and one patient (1%) taken fluid according To his output. Table-[16].

The study showed that 93 patients (91.2 %) of study group depend on their Self in their daily activity, 5 patients (4.9 %) Completely depend on other in their daily activity, and 4 patients (3.9 %) need assistance in their daily activity. Table [17] .

This study showed that 78 patients (76.5 %) they well adaptive on time and dose, 14 patients (13.7%) Taken it when they remember, and 10 patients (9.8%) ware neglect their medication. Table [18].

This study showed that 67 patients (65.7 %) have good self-esteem and 35 Patient (34.3 %) have bad self-esteem. Table-[19] .

This study showed that 67 patients (65.7 %) have poor social support, and 35 patients (34.3 %) have good social support. Table-[20].

51 patients (50%) had good dietary and fluid regiment compliance, 32 patient (31.4%) had very good compliance about dietary and fluid regiment.16 patients (15.7%) had poor compliance about dietary and fluid regiment, And 3 patients (2.9%) had excellent compliance about dietary and fluid regiment. Table-[21]-Figure - [4].

The study showed that all study group (102) patients (100%) compliance to dialysis session attend**.** Table-[22] .

List of tables

Part one: Socio demographic characteristics:

Table (1) : distribution of patients according to their age.

Age	Frequency	Percent
18-28 years	10	9.8 %
29-39	28	27.5 %
40-50	25	24.5 %
over 51 years	39	38.2 %
Total	102	100 %

Table (2) distribution of patients according to their Sex:

Sex	Frequency	Percent
Male	65	63.7 %
Female	37	36.3 %
Total	102	100 %

Table (3): distribution of patient according to their marital status.

Marital status	Frequency	Percent
Married	75	73.5 %
Single	15	14.7 %
Widowed	7	6.9 %
Separated	4	3.9 %
Divorced	1	1.0 %
Total	102	100 %

Table (4): distribution of patients according to their Residence.

Residence	Frequency	Percent
East of Shendi	31	30.4 %
Shendi	25	24.5 %
North of Shendi	20	19.6 %
South of Shendi	17	16.7 %
West of Shendi	9	8.8 %
Total	102	100 %

Table (5) Distribution of patients according to their employee.

Employee	Frequency	Percent
Unemployment	45	44.1%
House wife	32	31.4%
Employee	13	12.7%
Free worker	12	11.8%
Total	102	100%

Table (6): distribution of patients according to their Education level

Education level	Frequency	Percent
Primary school	39	38.2%
Illiterate	25	24.5%
Secondary school	23	22.5%
Khalwa	9	8.8%
University Graduate	6	5.9%
Total	102	100%

Part two: Commitment of patient with dialysis regimented:

Table (7): distribution of patients according to their duration of hemodialysis.

duration of hemodialysis	Frequency	Percent
More than 2 years	53	52 %
1-2 years	23	22.5 %
Less than 6 month	15	14.7 %
6 month - one year	11	10.8 %
Total	102	100 %

Table (8) distribution of patient`s according to their Number of dialysis session.

Dialysis session	Frequency	Percent
Twice per week	100	98%
Three time per week	2	2%
Total	102	100%

Table (9): distribution of patients according to their duration of dialysis session duration

Duration of dialysis session	Frequency	Percent
3 hours	95	93.1%
2 hours	4	3.9%
4 hours	3	2.9%
Total	102	100%

Table (10): distribution of patients according to their Understand of hemodialysis mean

Understand patient of hemodialysis mean	Frequency	Percent
Is used to remove fluid and uremic waste products from the body when the kidneys cannot do it.	98	96.1 %
therapy replaces normal kidney function	3	2.9 %
Washout waste products using machine	1	1 %
Total	102	100 %

Table (11): distribution of patients according to their Etiology of ESRD

Etiology of ESRD	Frequency	Percent
Unknown etiology	63	61.8 %
Hypertension	35	34.3 %
DM	4	3.9%
Total	102	100 %

Part three: dietary and fluid management:

Table (12): distribution of patients according to their eating chees, tuna, or olive

Eat chees ,tuna ,or olive	Frequency	Percent
Not eat	52	51 %
Sometimes	50	49 %
Total	102	100 %

Table (13): distribution of patients according to their eating red meat, eggs, beans-nuts, fish, or chicken

Eat red meat ,eggs ,beans-nuts ,fish ,or chicken	Frequency	Percent
Sometimes	95	93.1 %
Not eat	6	5.9 %
Every day	1	1 %
Total	102	100 %

Table (14): distribution of patients according to their eating fruits, vegetables or berries.

Eat fruits, vegetables or berries	Frequency	Percent
Some times	80	78.4 %
Not at all	16	15.7 %
Every day	6	5.9 %
Total	102	100 %

Table (15) :distribution of patients according to their Knowledge about signs of fluid overload.

Knowledge of patient about signs of fluid overload	Frequency	Percent
Sufficient knowledge	46	45.1 %
Poor knowledge	41	40.2 %
Knowledgeable	15	14.7 %
Total	102	100 %

Table (16): distribution of patients according to their Knowledge about daily fluid intake based on:

Knowledge about daily fluid intake is based on	Frequency	Percent
Take fluid freely.	47	46.1 %
According to doctor/nurse order	27	26.5 %
According to their weight	27	26.5 %
According to his output	1	1 %
Total	102	100 %

Table (17) : distribution of patients according to their daily activity.

Daily activity of patient	Frequency	Percent
Depend on them self	93	91.2 %
Completely depend on other	5	4.9 %
Need assistance	4	3.9 %
Total	102	100 %

Table (18): distribution of patients according to their Knowledge About drug used (eprex , caco3, one Alfa calcite, iron dextran, antihypertensive)

Knowledge of patient About drug used	Frequency	Percent
they adapt on time and dose	78	76.5 %
Take it when they remember	14	13.7 %
Neglect it	10	9.8 %
Total	102	100 %

Table (19): distribution of patients according to their Knowledge about self-steam

Knowledge about self-steam	Frequency	Percent
Good self esteem	67	65.7 %
Bad self esteem	35	34.3 %
Total	102	100 %

Table (20): distribution of patients according to their perception of social support.

Perception of social support	Frequency	Percent
Poor social support	67	65.7 %
Good social support	35	34.3 %
Total	102	100 %

Table (21) distribution of patient`s according to their dietary and fluid compliance

Dietary and fluid compliance	Frequency	Percent
Good	51	50%
Very good	32	31.4%
Poor	16	15.7%
excellent	3	2.9%
Total	102	100%

Table (22) : distribution of patients according to their compliance about dialysis session attend:

compliance of dialysis session attend	Frequency	Percent
Compliance	102	100 %

List of Figure:

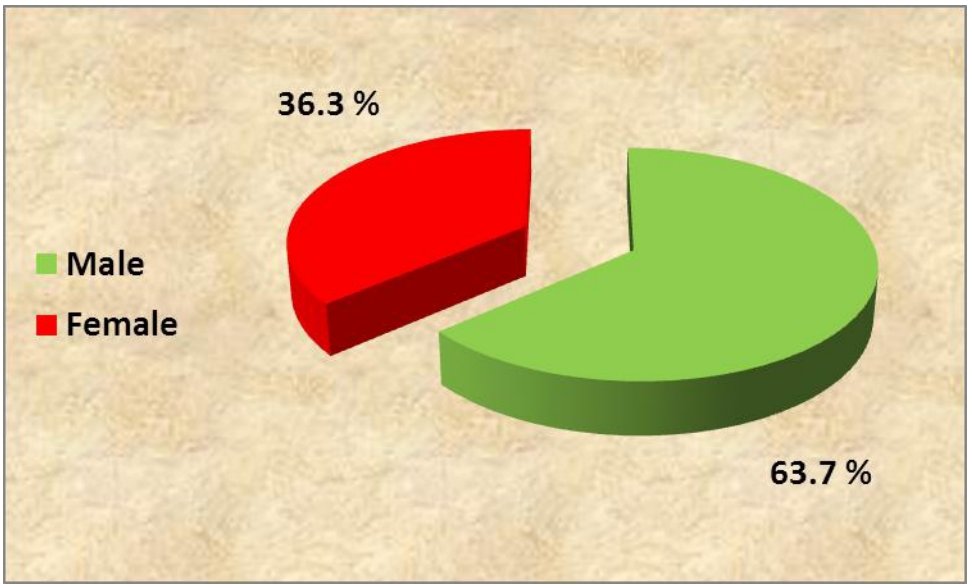

Figure (1) distribution of patients according to their sex.

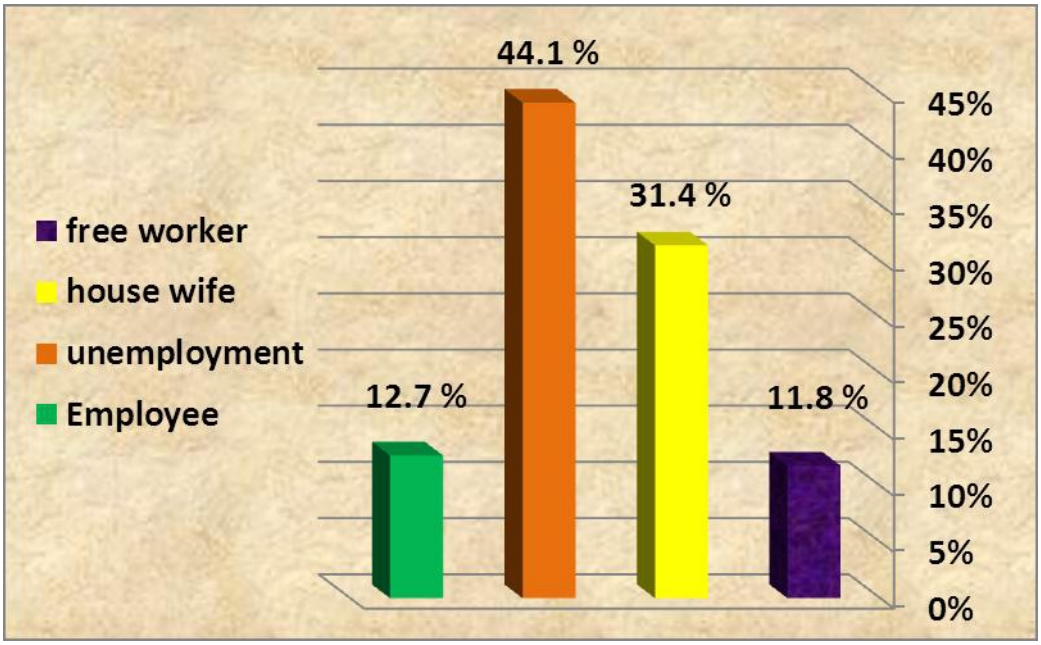

Figure (2) distribution of patients according to their employee.

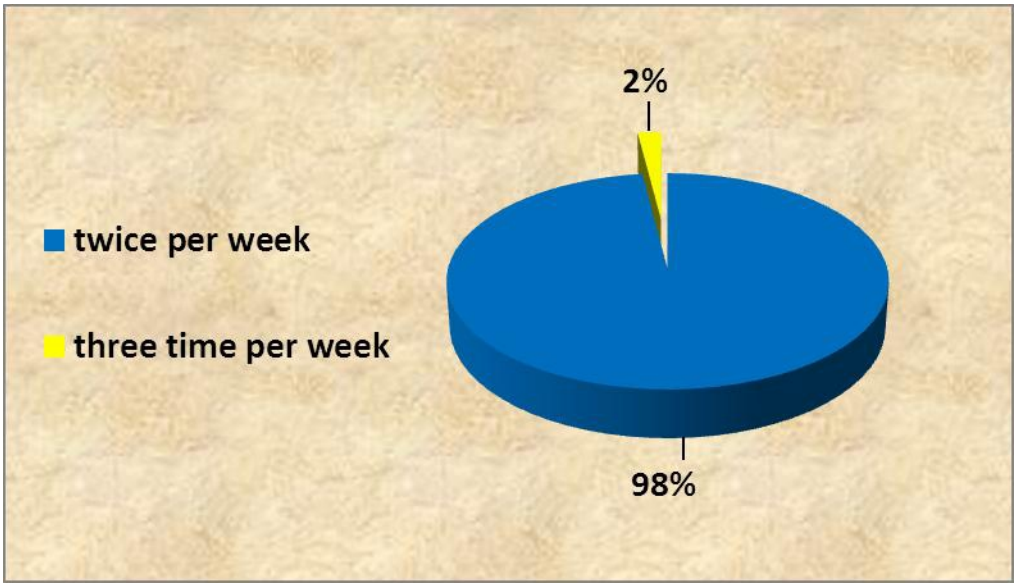

Figure (3): distribution of patient`s according to their Number of dialysis session.

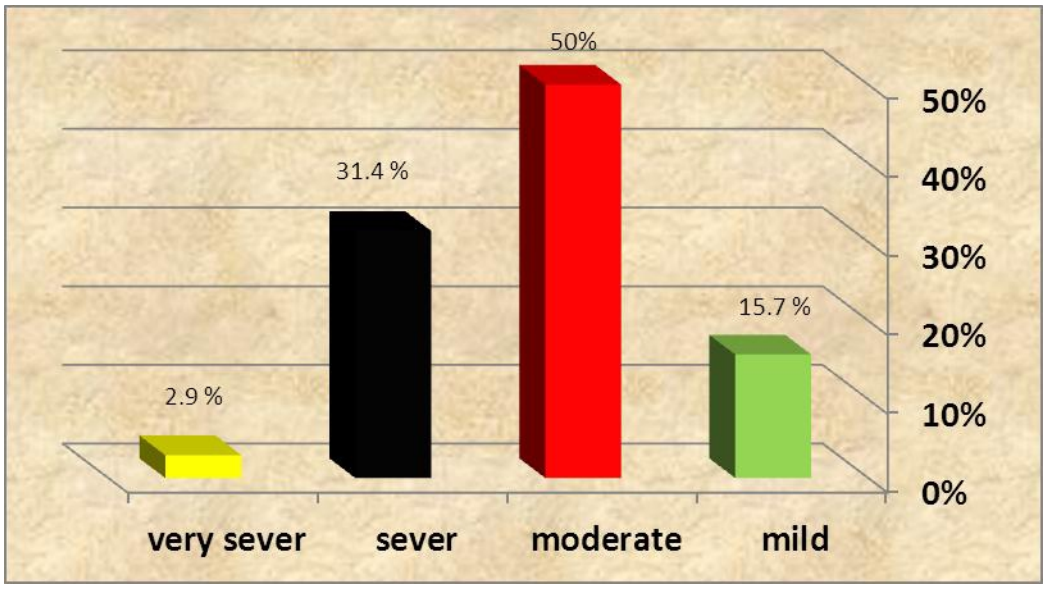

Figure (4): distribution of patient`s according to their dietary and fluid compliance

Chapter four

4. Discussion

4.1 conclusions

4.2 recommendation

Discussion

This is a descriptive- cross-sectional hospital base study include 102 patients Receiving hemodialysis in Elmek Nimer university hospital hemodialysis center to Assess knowledge about dietary and fluid restriction was conducted from (July 2014 to November 2014).

Study group characteristic:

This study found that 39 patient (38.2%) their age was over 51 year, this Result as the same results which founded previously by Collins AJ, Kaiser B, Herzog C, et al. the study taken from the United States annual data report of Renal Data System in 2004 and describes that 35% of new patients achieving end stage Renal disease are older than 60 years of age. [21]

During this study approximately more than two third 65 (63.7%) were male, Which is similar to study which fulfilled in the Sudan (renal replacement therapy) In June 2009 by Selamin. Wobeid H Abu-Aisha], there were 2858PT on HD in Sudan the mean age of HD PT (46+_ 17) and male constituted 66% [22]

I found 75, 73.5% of the population study was married.

31 patient (30.4%) were living in east of Shendi, that far from the Shendi City, in my opinion this because those patients which live in rural area have Insufficient awareness about the disease and reach the hospital when they failure From the alternative therapy instead of medical therapy, and their doctor not Advance them about the disease.

I get 45, 44.1%of patients were unemployment.39 patient (38.2) have primary School educational level.

Commitment of patient with dialysis regimented:

During this study 53 patients, (52%) their duration of hemodialysis was more Than two years. Most of patient 100 , (98%) having two hemodialysis session per Week, and most of them 95, (93.1%) having three hours duration of dialysis

Session, in most patients receive intermittent hemodialysis that involves treatments Three times week with the average treatment duration of 3 to 4 hours in an Outpatient setting. (4) In my study I found that the patient involves two sessions /week due to insufficient number of machine and not tolerate three times per Week.

Most of patient 98, (96.1%) defined that hemodialysis: - is used to removal Of the fluid and waste product from the body when the kidney can't sufficiently Work. this in dictate that the patients have good cognition.

Approximately two third 63 (61.8%) of patient were unknown to their Etiology of end stage renal disease, I think that refer to poor follow-up and seek of Medical assistance before discover the disease.

Dietary and fluid management:

In this study 52 patient (51. %) doesn't taking diet containing salt, that Agree with the patient on hemodialysis must be taking less salt and eat fewer salty Food, this my help to control blood pressure and reduce weight gains between Dialysis sessions, the patient should be used herbs spices and low-salt flavor Enhancers in place of salt avoid salt substitutes made with potassium. [23]

Most of patients 95,(93.1%) sometimes they taking diet containing protein. All patients that complain about kidney failure conditions should be taken more Protein diet on dialysis. Protein can help maintain blood protein levels and improve Health. Eat high protein food such as (meat, fish, or eggs) at every meal or about (8_10) ounces of high protein food every day. [23]

80 patient (78.4 %) sometimes taking vegetable and fruits only, this turns All vegetables and fruits have some potassium but Certain of it have more than Other and should be limited or totally avoided .limiting Potassium intake protect The heart. [23]

In this study 15patient (14.7%) were knowledgeable about fluid over loud Sings in my opinion this related to increase awareness and health education of Patients about the disease.

The study reflected that 47 patients, (46.1%) they taking their daily fluid Freely, 27 patients, (26.5%) they taking daily according to their doctor orders and Weight. The goal of fluid restriction is to help them to feel comfortable before, During and after their dialysis sessions, even though dialysis gets rid of excess Fluid and waste in the body, it is not as effective as healthy kidneys. [20]

The study clarifies 93 patients, (91.2%) doing their daily activity Depending On them-self. 78 patient s (76.5%) adapted on Dose and time regarding to their Drug administration.

67 patients, (65.7%) were cooperative with family and Community and good Self steam. Approximately two third 67, (65.7%) were poor social support because Perception of socially support only from their family, the study reflected that half Of patient 51, (50%) compliance regarding dietary and fluid regiment. This in Comparison with study done in Nottingham city hospital. UK attained by M.R MANJUNATHA.R (2009-2010). Which showed that near half of patients were Non-compliant with at least one dietary restriction. These findings suggest that Traditional, approach of information giving is inadequate; instead effective Educational methods motivate the patients to comply with dietary restriction. His Finding was contravention with my study result.in my opinion this result refer to The most of patient were educable and aware to important of fluid and diet Restriction in HD patient. [24]

All patients in this study have an excellent compliance to dialysis session Attend, because the hemodialysis center was reachable to them and those patients Get well educated the important of HD therapy.

Conclusions

After collection of date information and analysis I get that:-

- Most of the patients have sufficient knowledge about fluid and diet Restriction.
- In case of dietary compliance some patients in compliance about (content, frequency and habits).
- Patient's knowledge was good about fluid over load sings but poor in Compliance with fluid restriction.
- The duration and frequency of hemodialysis session is less and insufficient Comparing with international and ideal program.
- All patients were committed in hemodialysis session.

Recommendations

There is a need for special focus ESR patients to minimize health Deterioration, morbidity and mortality of the patients according to that on light of The study recommendation emphasized.

- To improve the awareness of the patients about their disease, I recommend the Hospital administration to establish frequent health messages toward the Patients to improve their awareness toward the disease.
- In whole the unit there is a need of nephrologist thus I recommend the Authorities of the hospital to bring nephrologist to follow-up and evaluate Health status of the patient.
- Also recommend that important of found nutritionist and psychotherapist.
- there is luck of enough machine in the unit and emergence machine thus I Recommend the administration to fix this as a priority.
- The nursing staff should be rotated to the different unit mainly in hemodialysis Unit to improve their skills.
- Further studies in multiple local and international centers are needed to further Expiree the real important of fluid and diet regiment inpatient with ESRD. These with provide clean quid lines for diagnosis and treatment.

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24-MR.MANJUNATHA.R 1St year M.Sc. (Nursing COMMUNITY HEALTH NURSING YEAR 2009-2010.

Questionnaire

Structured interview sheet about patient knowledge about home self-management (fluid and diet) in Elmek Ninir University Hospital

Part one: Socio demographic characteristics:

1-age:

A-(18-28) year ( ) B-(29-39) year ( ) C-(40-50) ( ) D-(over 51) ( )

2- Sex:

a. Male ( ) (b) female ( )

3- Marital status:

a) single (b) married (c) divorced | separated d) Widowed

(4) Residence:

(a) Shendi (b) west of Shendi (c) east of Shendi (d) north Shendi

(f) south of Shendi

(5)Employment:

(a) Free worker (b) house wife (c) unemployment (d) Employee

(6) Education level:

(a) Khalwa (b) primary school (c) Secondary school (d) graduate

Part two: commitment of pts. With dialysis regimen:

(1) duration of hemodialysis:

a) Less than 6 month (b) 6 month to one year (c) 1-2 year (d) more than 2 year

(2)Number of dialysis session:

A-once\w ( ) b-twice\w ( ) c-three time\w( )

(3)-duration of dialysis session:

a- 2hour ( ) b-3hour ( ) c-4 hour ( )

(5)-do you know what is hemodialysis mean?

A-wash out waste product using machine ( )

b- Is used to remove fluid and uremic waste products from the when the kidneys cannot do so body ( )

C-therapy replaces normal kidney function ( )

(6) Etiology of E S R D?

a) Hypertension (b) diabetes (c) unknown etiology (d) other

Part three: dietary and fluid management:

1- Do you eat cheese, tuna or olive?

a- every day ( ) b- sometimes ( ) c- not at all ( )

2 - Do you eat red meat, eggs, beans nuts, fish or Chicken?

a- every day ( ) b- sometimes ( ) c-not at all ( )

(3) Do you eat fruits, vegetables or berries?

a- every day ( ) b- sometimes ( ) c- not at all ( )

4-do you know signs of fluid overload?

A-edema ( ) b- Buffy face ( ) c-shortness of breath ( )

D-uncomfortable on lying flat ( ) e. weight gain ( )

5-the daily fluid intake is based on:

A-according to doctor/nurse order ( ) b-I take fluid freely ( )

C- I take according to my weight ( ) d – I take according to output ( )

6-about your daily activity:

a-depend on yourself ( ) b-need assistance ( ) C-completely depend on other ( )

D-have exercise regimen ( )

7-about drug used :(eprex , caco3, one Alfa calcidl, and iron dextran, antihypertensive)

a-you adapt on time and dose ( ) b-increase dose ( ) c-neglect it ( )

d-doubled dose if you forget it( ) e-take it when you remember ( )

8- About self steam:

A-feel isolated ( ) b-cooperate with family and community ( ) c-sensitive ( )

D-fear of death ( ) e- haven't role in community ( ) f-satisfy( )

(10) Perception of social support:

(a) Family (b) friends (c) health care team member (d) others

(11) Dietary and fluid compliance:

(a) Mild (b) moderate (c) sever (d) very sever

(12) Dialysis section attends:

A) Compliance (b) noncompliance)

(13) If noncompliance causes is:

(a) Trans port (b) not important (c) financial (d) not need

Concenet:

Elmek Nimer university hospital

Department of Hemodialysis unit

Shendi University

Faculty of graduate studies and scientific research

Subject: *Assessment of Patient with End Stage Renal Disease on Hemodialysis knowledge about Home-Self management regarding (fluid and diet) in Elmek Nimir University Hospital* Centre *2014*

Investigator: *Rogiya Hamza Nasr EL din EL Bashir*

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Consultant Physician

إقرار بالموافقة

الاسم :---------- ----------

العمر :---------- العنوان :----------

أوافق بمحض ارادتى بالمشاركة فى البحث العلمى المتعلق بنظام المعالجه المنزليه لتقليل السوائل واهمية التغذيه لمريض الفشل الكلوي لتقني التمريض :رقيه حمزه نصر الدين البشير

بعد أن شرحت لى بأنه لا يترتب عليه أى أذى جسدى او نفسى واعلم أن المشاركة في هذا البحث لن تؤثر بأي حال من الأحوال في الرعاية الطبية التي أتلقاها كما أنه يحق لي بدون ابداء أسباب الإنسحاب من هذا البحث في أي مرحلة من مراحله.

البحث باشراف الدكتور متوكل امام عوض الكريم

التوقيع : ---------- ---------- التاريخ: