

Self-Care of Patients with Vascular Access for Hemodialysis

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ABSTRACT

The present study evaluated the self-care of patients with vascular access to hemodialysis of a second level Hospital in Mexico from a biopsychosocial perspective. It is a qualitative, descriptive, cross-sectional study where patients applied a semistructured instrument of 22 questions based on five areas: autoacceptation, social relationship, activity/rest, hygiene and eating habits in the liker scale With a Chronbach alpha of 0803. Where it was found that the patients show a deficit of self care with the 55% was inadequate in the area of activity/rest, according to the questions the 90% are tired, 45% stressed and the 25% carry out activities of effort, by the poor knowledge in those exercises that you can perform and these should be suitable for the improvement of its current state.

Key words: Hemodialysis, Nursing Care, Vascular Access

1. Introduction

The World Health Organization (WHO) refers that 10 to 16 per cent of the world population suffers from chronic renal failure (CRF), in the last two decades in the subregion of Central America has been reported 40,000 new cases of people who suffer from chronic kidney disease (CKD) and who die for this cause and, among these cases, a type of CKD has been reported that is not related to the most common causes, such as diabetes mellitus and hypertension (who, 2014).

With reference to the end-stage renal disease (ESRD) shows a significant number in the face of this situation, the incidence at the international level has a great impact; in Taiwan with 458 cases, Mexico with 421 cases and the United States with 363 cases per million inhabitants, to buy these evidence shows the impact significantly the pathology. Likewise the Diabetes Mellitus is the main factor in WRS at international level in Malaysia 64%, Singapore 62% and Mexico 58%,

which are countries with the highest incidence respectively. However there is a particular incidence in some countries, that have the possibility to continue with the treatment for HD; According to global statistics per million inhabitants is displayed according to the sex and country; in Taiwan 500 and 415 are receiving adequate treatment, in the United States 426 men and 302 women respectively (Bulletin Factográfico of the Library Medica National, 2016).

Therefore the prevalence of the ERT in Taiwan with 3,138 cases is treated per million inhabitants, a significant number reflected considering the economic investment in health spending by capital.

On the other hand in the United States 2,043 cases are dealt with by every million inhabitants with a health spending by capital of 9,146. Mexico is in sixth place with 1,654 cases with ERT and are treated without reference of economic investment.

However, Japan with a 96.9%, Bosnia with 96.5% and the Philippines with 96.1% in prevalence on hemodialysis (Bulletin Factográfico of the Library Medica National, 2016).

According to the National Institute of Statistics and Geography (INEGI) in the year 2012 concerns 12 thousand deaths of Renal Insufficiency cataloguing the state of Mexico with the highest incidence with 1,487 cases, followed Mexico City with 948 cases, Jalisco with 920 cases and Puebla with 756 cases, determined as the fourth place at the national level (INEGI, 2012).

In Mexico for every million inhabitants only 1,086 cases of the ERT receive dialysis treatment, while the 52.2% receives the hemodialysis treatment and according to the rate of kidney transplant the 57.7% per million inhabitants (Méndez, 2010).

Chronic Kidney Disease. In accordance with the Mexican Foundation of the Kidney refers to the ERC as the clinical syndrome resulting from the progressive loss, permanent and irreversible nature of the structure and renal dysfunction, it is a chronic disorder and terminal of both kidneys, the body loses the ability to filter toxic substances in the blood and the person requires substitution treatment for renal function to preserve life (<http://www.fundrenal.org.mx/erc.htm>).

Therefore there are triggers of the ERC, considered as risk factors modifiable; dyslipidemia, obesity, anemia, proteinuria, and cardiovascular diseases predominant factors; diabetes mellitus, arterial hypertension, obstruction of urinary tract contribute to the deterioration of the pathology (Guzmán, 2014).

The signs tend to be noticeable until it has lost a 80-90% of the renal function, considering that the rate of progression varies from month-years between them can be presented oliguria and therefore edema and hypertension, muscle weakness, loss of muscle mass, proteinuria and hyperlipidemia, pain or muscle spasms, headache, changes in your skin color, fatigue (Peña, 2015).

During the course of the disease is a progressive decrease in the glomerular filtrate by decrease of nephrons functional, which increases the risk of

cardiovascular disease and death. (Barragán, 2014)

Chronic kidney disease is measured according to the five stages; the first stage is displayed with renal damage with the rate of glomerular filtration rate (GFR) normal or high greater than 90 ml/min/1.73m²; the second stage with kidney damage slight-low GFR of 60-90 ml/min/1.73m², the third stage refers moderate decrease of GFR of 30-60 ml/min/1.73m², the four stadium with decrease severe of GFR of 15-20 ml/min/1.73m² and finally the fifth stage is displayed with kidney failure of less than 15ml/min/1.73m² implies that we must consider the substitution therapy or replacement (Guide to the management of chronic kidney disease 2007).

However treatment includes the maintenance of the integrity of the nephrons even functional, compensation of metabolism acid-base, electrolytic balance: on the other hand treatment is divided into two aspects, the first refers to the base of the glomerular filtrate/ degree of diuresis if the glomerular filtrate is greater than 30ml/minis limited to a conservative treatment as the control of arterial hypertension, fluid and electrolyte balance, also if the glomerular filtration rate is less than 30 ml/min is must take into account the rules of diet, the balance acid-base, before the patient's life is in danger (Master Catalog of Clinical Practice Guidelines).

With regard to treatment three options are displayed before the ERC; kidney transplantation, the peritoneal dialysis and hemodialysis, this latter procedure allows to remove toxins and excess fluid in the body through the use of a machine and a dialyzer, also known as artificial kidney(Barragán, 2014)With regard to the patients with a diagnosis of ERT in stage 5 the majority of them must comply with a program of Hemodiálisisl (HD)(Cristóvão, 2013).

The clinical practice guideline "Management of vascular access in hemodialysis" refers to the vascular access is the point anatomical by where you will access the bloodstream of renal patients and by where you extracted and return the blood once it has passed through the circuit

extracorpóreo of debugging extra renal function (Clinical Practice Guideline) there are three options of venous access; arteriovenous fistula, arteriovenous graft, and the venous catheter focuses, whose election will be according to criteria of the intervention of treatment, in this way the patients who are admitted to treatment of HD are subjected to high levels of stress, with regard to the restriction of diet and control of liquids, fatigue, limitation of physical activities and social(Rivera, 2015).

From the perspective of nursing interventions suitable toward the patient leads to try to balance the dimensions that comprise the person, to the attention of the patient is very important to identify values biopsychosocial taking into account the interference that produces the disease, the study is centered in: self-care on the basis of an assessment of the autoaceptación, social relation, activity-Rest, Hygiene and eating habits (predictors psychosocial)(Perales, 2012).

Orem defines "self-care as a conduct that exists in specific situations of life, directed by the people to themselves or to their environment, to regulate those factors that affect their own development and operation for the benefit of their life, health and welfare"(Taylor, 2003)

The general theory of Orem is integrated by three theories: Theory of self-care Theory of deficit of self-care and the theory of systems of nursing.The self care consists in the practice of activities that people initiated and carried out in certain periods of time, by his own party and with the interest of maintaining a healthy functioning, continuing with the development people and welfare. The theory of self-care; referred to as a regulatory function of man, you must learn and develop deliberately, continuous and according to the requirements of each person, the theory is also extended with the theory of care dependent, which expresses the objective, the methods and the results of the care (Savannah 1993).

The requirements of self-care require to take sanitary measures at specific times or over a period of time, result in the promotion of health and the prevention of specific diseases, by

consequent the requirements are: universal, of development and deviations of Health(Reyes, 2007).

The central idea of deficit theory of self-care is that the needs of the people in need of nursing are associated with the limitations of their actions related to their health or to their health care. Whose limitations are returning to the individuals completely or partially unable to know the existing requirements and emerging for their own care. The deficit of self care is a term that expresses the relationship between the capacity for action of the people and their needs for care(Vega, 2001).

The theory of systems nurses said that nursing is a human action; systems nurses are systems of action formed (designed products) by nurses through the exercise of its activity for people with limitations arising out of or associated with their health self-care or in the care dependent. The systems nurses can be prepared for people who represent a unity of care dependent, for groups whose members have therapeutic needs of self-care with similar components or limitations.(Vega, 2001)

2. Method

A qualitative study was carried out, descriptive and cross-sectional in patients with vascular access for hemodialysis of second-level General Hospital in Mexico, with a pilot test of 20 patients, prior informed consent on the voluntary participation before the investigation.

Sociodemographic variables that were considered are: age, marital status, sex, religion, occupation, type of venous access, time of insertion of venous access.

The instrument has 22 questions of the author Mayra Cabrera Sosaya in Chiclayo 2013, divided into five areas: autoaceptación, social relation, activity/rest, hygiene and eating habits with a reliability Alpha Chronbach of 0.803 with the score of 2-0(2 Always, 1 to 1 times, 0 Never) in the items 1,2,3,4,5 of autoaceptación 6,7,8 of social relationship and 13,14,15,16,17 in the area of hygiene. And for the items 9, 10, 11,12

activity/rest and 19, 20, 21,22 in eating habits (0 Always, 1 to 1 times, 2 Never) were invested in its assessment.

3. Results

Of the total study population shows 60% male and 40% female, male sex represents approximately 60% of patients in substitutive renal treatment described as a factor prognosis independent of suffering ERC (Lorenzo, 2016).

60% of the patients refer to being unmarried, 30% married, 5% widowed and 5% currently divorced. However, the level of studies reached shows that 55% of patients have high school level, 40% secondary and 5% primary.

For the treatment of Hemodialysis requires a venous access for that reason it was necessary the knowledge of access with which they count, 50% with arteriovenous fistula, 40% with central venous catheter temporarily and 10% with graft.

The 35% have access from 4 years ago, 25 per cent has had for 3 years, 20% is 2 years old, 10% 5 years, 5% with 6 years and 5 per cent account with access from 9 years ago to provide care and protection.

To assess the state of self-care of patients with venous access are generally shows that 65% is inadequate, the 20% inappropriate and 15% suitable, presenting a deficit in the self care with the need to orient, promote and prevent all those complications that could trigger.

According to the instrument is assessed by areas, with regard to paragraph of autoaceptación 80 per cent of the patients maintain an appropriate perception aimed at the different physical changes in the progress of the disease, the other 20% is inadequate, this is reflected in accordance with the paragraph of the questions, the 40% feel unsafe and positive, in which is shown to be irresponsible and negative in feel proud. According to the instrument is assessed by areas, with regard to paragraph of autoaceptación 80 per cent of the patients maintain an appropriate perception aimed at the different physical changes in the progress of the disease, the other 20% is inadequate, this is reflected in accordance with the paragraph of the

questions, the 40% feel unsafe and positive, in which is shown to be irresponsible and negative in feel proud.

In the social relationship 60% is adequate, and with regard to be area the 75% consider the family as a source of prosperity; while 40% self-care is inadequate, this leads to the 25% has negative outlook toward the family and the 95% denies belonging to social groups or live with friends respectively to paragraph of the questions.

According to the activity/rest 55% is inadequate in paragraph 90 per cent spoke feel tired or exhausted, given the case that the 25% carry out activities of effort by which is not optional but by labor issues. The 45% has episodes of stress and sometimes perform any type of activity to relax.

It is important to mention that the 100% of the patients maintain a personal hygiene adequate, which indicates that according to the area the 95% performed daily bath with mild soap, 80% makes the change of clothes daily and loose, applying cream to hydrate the skin, omitting the use of lotions that extreme dryness the skin and prevent infection.

The results show that 60% of patients maintain adequate food, 40% inappropriate, of the questions it was obtained that the 65% sometimes consume food in great quantity, as well as the 70% sometimes consumes egg and cheese, considered as foods rich in phosphorus. In addition to the 40% sometimes consumes meat, fish and seafood, before this situation should be to carry out the process of double cooking ,this helps food lost a certain amount of potassium it contains.

4. Discussion

The 15% of patients have a self-care adequate, the 65% unsuitable, and the 20% inappropriate; with regard to the valuation of the five areas, the autoaceptación 80% is positive, given the perception of the current status of your life and health, referring satisfaction and coping with its pathological process on a psychological level in comparison to a study carried out in Santa Clara(López, 2005) shows that 50% of patients

show a negative state originated by the pathology given the dramatic shift toward new habits, aspirations and hobbies to avoid impact on mood, and the psychological well-being. In Hospital area patients are oriented by the nursing staff in the autoacceptation focused on those physical changes that will have in the course of his life as well as the venous access for its treatment, the impact it will have on their personality while in the investigation of Lopez(2005), focused to evaluate programs psychoeducational and the role of the educational psychology therapeutic found with a deficit in the application and orientation toward patients reflected before the situation of depression and episodes of rejection, showing a poor job of the health team.

Social relations are suitable with the 60% in family and social according to the questions the 75% considers the family as a source of prosperity, reflected a social interaction suitable, this allows to understand the changes that over time have led, however in the study of Perez(2013) Described in the social area with a 59.3% bad in which encompasses the personal relations, the support they receive from their relatives and friends, is perceived a scope negative during the course of the treatment. Nursing in the face of such a situation has been responsible for providing the necessary support to patients in which allows to adapt to their new life style in the presence of their disease and loss in social relations, motivation toward their environment in the coexistence, from the humanistic perspective of Pérez (2013) Inserts each time more in nursing play a determinant role in the area of teaching educating and instructing patients on the comprehensive care, psychological and processes of therapeutic treatment, implementing strategies and incorporate them fully to the programs for the prevention of complications, trying to catch a glimpse of the relationship between the disease and the patient, by revealing the importance of the process of communication and assistance in all their levels of the sick individual

Physical exercise is recommended for all persons, especially for patients with CRF; according to the

results the 55% shows a self care inadequate in activity/rest, according to the WHO Strategy on Diet, Physical Activity and Health(DPAS) In which concern the experts exercise 20 to 30 minutes 3 times a week, moderate activities like walking, dancing, (OMS-DPAS, 2006) The 90% of the patients sometimes feel tired, similar to the study of Chillogallo (2014) 69% does not perform any physical activity because they were unaware of the activities that can and must perform, considered an option to walk.

In the investigation of Carrasco (2014) 63% make any type of physical exercise for more than 30 minutes, it has been demonstrated that the aerobic exercise can improve the control of blood pressure and lipid profile(Moreno, 2015), In both cases is the lack of guidance on those aerobics whose purpose is to help the improvement of the muscles and to maintain an adequate cardiac rhythm, this leads to better withstand the hemodialysis and prevent cardiovascular complications. As well as providing information on the benefits that this gives to improve breathing and fatigue, in the investigation of Moreno physiotherapy has been of great value based on the prescription therapeutics decreasing the use of inflammatory mediators, increase in the size of the muscle fibers and prevention of cardiac arrhythmias which leads to the improvement of patient with IRC.

The 100% of patients maintains a personal hygiene appropriate, according to the questions the 45% always protects its central venous catheter because they are 8 patients who have access, 95% have adequate knowledge of the signs of infection in the access. Similar to a study in Ecuador (Valverde, 2016) In which indicate that the 89.3% of the patients maintain a proper hygiene and the remaining has no caution in the self-care of their personal hygiene. Both studies reflect the importance on the self-care of the hygiene, in which patients make all those activities aimed not only to self-care of venous access but also to the personal hygiene. It is necessary to continue with the contribution of information as well as the prevention of infections through the protection of the catheter during the

bathroom, avoiding abrupt movements. Feel the operation of the thrill of the fistula, avoid pressing the arm or take the pressure, sleep on the arm or lifting thought objects.

For patients in this treatment of HD requires a strict control in the intake of foods rich in potassium, sodium, fat and liquids, 60% is shown with a habit foodstuff suitable, That is to say, these patients have a strict control on your weight to avoid excess and retention of liquids, as well as avoid consuming certain foods like fish, seafood, fruits such as bananas, oranges.

The 40% shows a self care inadequate in eating habits since 65% consumed food in large quantities for episodes of anxiety, in comparison to the study of Navarro (2015), 93% of patients do not comply with an adequate diet, while 33 per cent consume fluids greater than what is permitted and the 51.1% continues to consume sometimes salt; during the stay of the treatment is performed the guidance on those foods permitted, the number and frequency, the objective of this is to improve the state of the patient as well as avoiding the retention of liquids, constipation by the low intake of liquids. Patients should avoid eating salt since this leads to a reduction in the consumption of water and in this way facilitates the purification of the blood during the treatment. The orientation toward providing an adequate diet prevents complications such as cramps, hypotension, weakness and dizziness. As well as the food citrus fruits have high potassium content, so it is detrimental to the patient and can present tables of hypercalcemia.

The terminal chronic renal failure impairs the function of the kidneys by such reasons patients are subjected to treatments of renal replacement, from it initiated various changes and especially the self care as a major factor making activities toward the person with the purpose of preserving and conserving their health.

He self-care of patients with kidney failure is displayed little adequate, the majority of patients with catheter and fistula have Caution, protection and care on their access, but there is a deficit in the area of activity/rest which leads to the

imbalance biopsychosocial, this interferes in the state of health and the capacity of the self-care of the patients. In other areas the results show that the patients maintain a self-care appropriately, i.e., are aware, accept and face the pathological process, adhere to all those changes that carries the disease and are consistent with the treatment.

On the other hand the fundamental role of nursing is to promote, prevent and perform interventions that lead to the decline and improvement of self-care. Although patients show a self care little suitable it is important to strengthen the self-care that must have, mentioning the benefits that lead toward its own agency.

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