Available online freely at www.isisn.org

Bioscience Research

Print ISSN: 1811-9506 Online ISSN: 2218-3973

Journal by Innovative Scientific Information & Services Network

RESEARCH ARTICLE BIOSCIENCE RESEARCH, 2020 17(1): 01-12. **OPEN ACCESS**

Impact of End-Stage Renal Disease and Hemodialysis in Physical and Psychosocial Status of Elderly Patients

Gehan Refat Mohamed Hefnawy

[1]College of applied medical science, Nursing Department, Jouf University, **Saudi Arabia.**
[2]Faculty of Nursing, Geriatric Nursing Department, El-Minia University, **Egypt.**

***Correspondence: gehan.hefnawy@ju.edu.sa** **Accepted: Received: 31-10-2019, Revised: 21-11-2019, Accepted: 29-11-2019 e-Published: 16-01-2020**

Although end-stage renal disease and its treatments causes a variety of physical, psychosocial, cultural, and spiritual burden for both patients and families, few studies estimated it. The current study aimed to evaluate the frequency of physical, and Psychosocial disorders in ESRF elderly patients. It's a descriptive cross-sectional study carried out in Dialysis units of El-Minia City in Egypt. One hundred and fifty-two patients shared in the study. It was found that 80.3% of the sample can't do an activity of daily living without assistance, 77.6% had shortness of breath, 40% had general weakness and 23% had general edema. Regarding psychosocial status, 77.6% of patients prefer isolation, 80% of them were sad and 46% refused communication with the health team. There are negative relations noted between duration of end stage renal failure disease and acceptance of disease while positive relation noted between duration of end stage renal failure and the following, isolation, social family relation, and feeling of weakness. Also, There are positive relations between duration of dialysis sessions and both isolation and weakness. Elderly patients with end stage renal failure were suffering from major physical and psychological disturbances related to aging, chronic diseases and on the other hand failure of disease coping. So, those fragile categories needs more specific programs for learning them and their families different aspect of coping mechanisms for dealing with physical and psychosocial burden associated with renal failure.

Keywords: End stage renal failure, elders, physical and psychological disorders, Egyptian statistic

INTRODUCTION

In Egypt, according to the estimation of the United Nations Department of Economic and Social Affairs, January 2019, the percentage of population 65+ is 4.5% of the total population. Additionally, the total life expectancy of both sexes is 72.7 years (Male life expectancy is 70.1 years and Female life expectancy is 75.4 years). United Nations Department of Economic and Social Affairs: Population Division. Egypt Population. 1st of January 2019. Percent of Egyptian older people expected to reach 10.9% in 2026. El-Moselhy , 2016 Elderly kidney function changes result from normal aging, furthermore medications such as non-steroidal anti-inflammatory drug, and aspirin, which contribute to kidney disease in this population. Also, the contrast dye used in radiologic tests cause acute kidney injury (AKI). Balogun and Abdel-Rahman , 2019

Third National Health and Nutrition Examination Survey data, in the United States, illustrated that almost 40% of people 60 years and older have some degree of chronic kidney

disease. Mallappallil et al., 2014

The Global Burden of Disease, 2015 found that 1.2 million people died from kidney failure in 2015, an increase of 32% since 2005. Luyckx, et al., 2018, report that 2.3–7.1 million patients were died without admission to dialysis, in 2010. And each year about 5–10 million patients died from kidney disease.

The prevalence of chronic renal failure patients under hemodialysis continues to increase especially among older patients. Since 2000, the number of ESRD aged person 65–74 years and ≥ 75 years have been increased by 30% and 50%, respectively. In Egypt, the prevalence of chronic renal disease increased from 225 /1 million in 1996 to 483/ 1 million in 2004. Ibrahimand and Wegdan , 2011

End-stage chronic renal failure (ESRF) has a serious impact on the physical, mental, spiritual, and psychological conditions of patients undergoing hemodialysis. Furthermore, the patients' psychological status is affected by their family support. Patients tapping their efforts to develop defense mechanisms, exhibit psychiatric disorders, refusal of treatment and disruption of interpersonal and family relationships. (Smith and Soliday , 2001, Gerogianni and Babatsikou , 2014 and Spiridi et al.,2008.)

Assessment of physical and Psychosocial status of elders with ESRF offer prognostic information concerning the survival of patients and may account for the predictive value of their quality of life.

The current study aimed to evaluate the frequency of physical, and Psychosocial disorders in ESRF elderly patients.

MATERIALS AND METHODS

Design;

It's a descriptive cross-sectional study.

Setting of the study;

The study was carried out in the Dialysis units of El-Minia university hospital and El-Minia general hospital.

Sample;

Convenient sample of 152 elderly patients aged 60 years and more undergoing hemodialysis participated in the study.

Inclusion criteria;

All elderly patients with chronic renal failure in hemodialysis units invited to share in this study.

Exclusion criteria;

Patients with acute renal failure, aged less than 60 years and peritoneal dialysis.

Ethical Consideration;

An official approval letter was obtained from the Dean of Faculty of Nursing in El-Minia-University and delivered to the directors of El-Minia Hospitals to obtain the necessary approval to conduct the study. This letter included permission to collect the necessary data and explain the purpose and nature of the study. Verbal consent was obtained from patients before their sharing in the study.

Tool of data collection;

Researcher developed a structured interview questionnaire based on the review of literature, it consists of three main parts;

Tool (1):

Socio-demographic data include; (age, sex, level of education,).

Tool (2):

Researcher developed this sheet for gathering information about the history of disease from patients themselves, their relatives, and from patient's charts, include;

a- History of urination problems; (nocturia, urinary retention, urinary incontinence…).
b- Etiology and risk factors of renal failure; (hypertension, diabetes, chronic pyelonephritis, obstructive uropathy, ……..).

Tool (3):

Researcher developed this sheet for gathering information about;

a- Dialysis session; (period of dialysis, number of dialysis sessions per weak, duration of dialysis, …….).
b- Physical disturbance ; (activity of daily living, general edema, shortness of breathing, vomiting, ……).
c- psychological disturbance; ((isolation, acceptance of the disease, ……).

Data collection:

Collection of data starting from the beginning of July 2019 to the end of August 2019, through two days weekly alternative between the two hospitals, through 3 shifts ,the first shift from(8 am:12pm), the second from(12pm: 4pm),third and last shift from (4pm:8pm). The average number

which interviewed was from 4 to 6 patients per day.

Methods of data collection:

A pilot study was conducted before data collection to evaluate the clarity of the study tool and to determine the time needed to fill the sheet. It was carried out on a sample of 17 elderly patients suffering from chronic renal failure, who was excluded from the total sample. The necessary modification was done according to the result of the pilot study

Data was collected by interviewing every elderly patient or his/her relative, individually at both hospitals after explaining the purpose of the study and taking their permission for sharing in the study. The researcher started an individual interview with each elderly patient, completed the sheet for all elderly patients and wrote exactly the answers that the patients were given. Also, reviewing patients' sheets. A session with a patient takes from 60:90 minutes according to the respond of the patients.

The data obtained were reviewed, prepared for computer entry, coded, analyzed and tabulated. Data analysis was done by using (SPSS) version 16 and clearing of data was done then data analysis was started by descriptive statistics "frequencies and percentage". It was followed by the application of chi-square with p-value <0.05 taken as significant. Regression analysis was beyond the scope of the study.

RESULTS

Table (1) shows the distribution of renal failure patients according to their socio-demographic characteristics. It was noticed that the number of male patients was more than female patients in this study (67.8% vs. 32.2%); also, there were more patients from rural areas than urban areas (56.6% vs. 43.4% respectively). The mean age ± SD of the patients was 64.7 ± 4.75 years (range 60 to ≥ 75 years) and 77.5% less than secondary school. Concerning marital status, 81% were married, and 18.4 were a widow. The majority of ESRF elderly patients (94%) didn't work after suffering renal failure.

As shown in Figure (1): approximately half of the study sample (43.6%) had urination changes before confirming chronic renal failure.

This figure illustrate frequency of urinary problems before renal failure. It was found that (18%) from patients had history of burning sensation during urination, (9.2%) had nocturia, (6.6%) had turbid and dark urine color, (4.6%) had urine retention, (3.9%) had frequency urination, and (1.3%) had incontinence.

As shown in Figure (2): Hypertension and diabetes mellitus are constitute about half (45.8%) of causes of chronic renal failure.

Table (1): Socio-demographic characteristics of the study sample

Items	No. "152"	%	P-value
Age: (years)			
60 - < 65	99	65	*<0.0001
65 - < 75	41	27	
≥ 75 years	12	8	
mean ± SD	64.7 ± 4.75		
Gender:			
Male	103	67.8	*<0.0001
Female	49	32.2	
Residence:			
Urban	66	43.4	*<0.0001
Rural	86	56.6	
Marital status:			
Married	123	81	*<0.0001
Divorced	1	0.6	
Widow	28	18.4	
Level of education:			
Less than secondary school	118	77.5	*<0.0001
Secondary school	22	14.5	
University	12	8	
Occupation:			
Worker	54	35.6	*<0.0001
Employee	72	47.4	
Housewife	26	17	
Job after renal failure:			
Work	9	6	*<0.0001
Not work	143	94	

* P value ≤ 0.05 = significant differences SD: Standard deviation

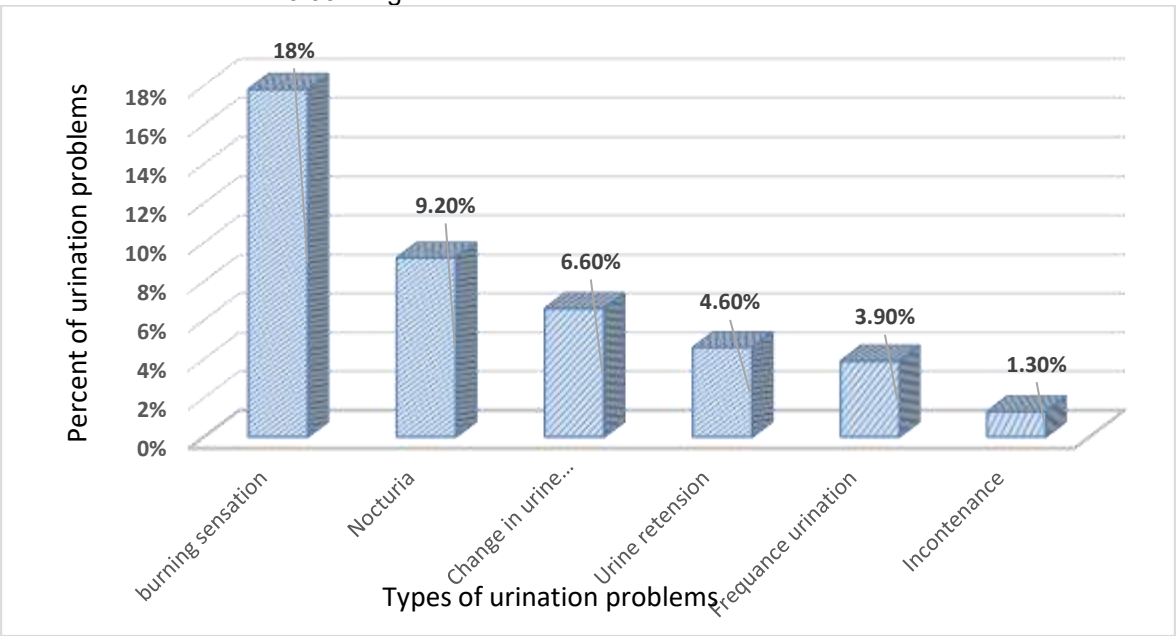

Figure 1: History of urination problems among ESRF elderly patients

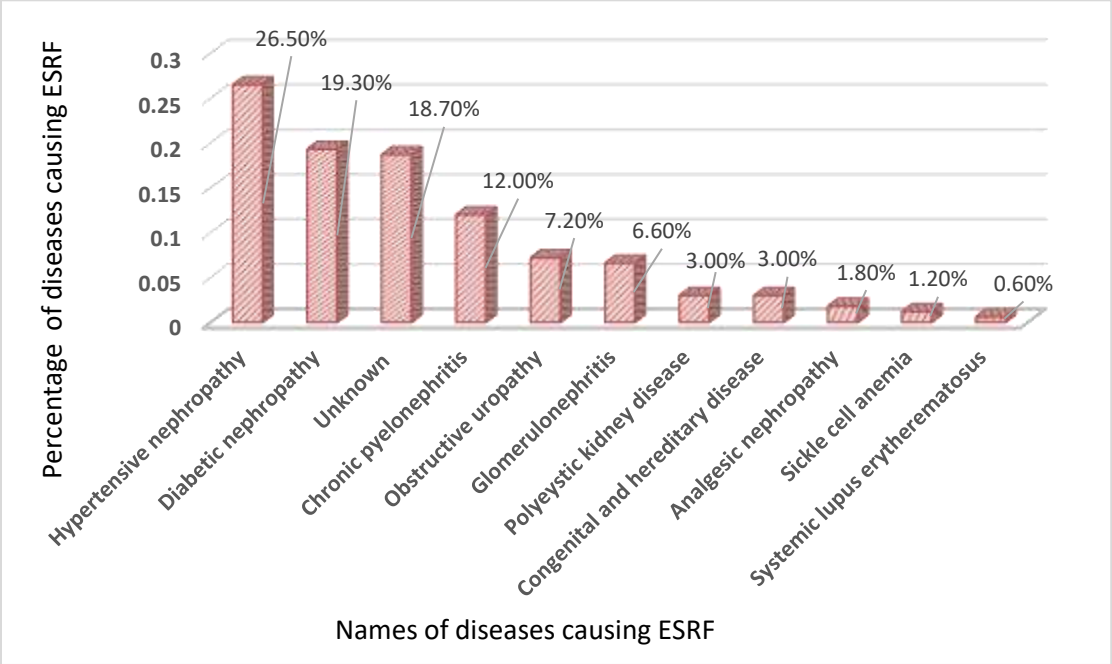

Figure 2: Etiology/ risk factors of ESRF as recorded in patient's charts

Table 2: Information of dialysis sessions of elderly patients

Items	No. "152"	%	P-value
Presence of family member during dialysis			
Present of family member	118	77.6	*<0.0001
Patient alone	34	22.4	
Duration of chronic renal failure:			
< 6 months	35	23	*<0.0001
6 months - 3 year	82	54	
> 3 years	35	23	
mean ± SD	**(24.5±17.05) months**		
Number of dialysis sessions per week:			
Twice	40	26	*<0.0001
Three times	112	74	
Duration of dialysis session:			
2 hours	7	4.6	*<0.0001
3 – 4 hours	139	91.4	
> 4 hours	6	4	

*P value ≤ 0.05 = significant differences SD: Standard deviation

Table (3): Physical disturbance of ESRF elderly patients

Items	No."15"	%	P-value
Impaired of activity of daily living			
Yes	122	80.3	*<0.0001
No	30	19.7	
General edema			
Yes	35	23	*<0.0001
No	117	77	
Shortness of breath			
Yes	118	77.6	*<0.0001
No	34	22.4	
Weight loss			
Yes	20	13.2	*<0.0001
No	132	86.8	
Skin itching			
Yes	71	46.7	*<0.0001
No	81	53.3	
Muscle cramping			
Yes	42	27.6	*<0.0001
No	110	72.4	
Nausea			
Yes	59	38.8	*<0.0001
No	93	61.2	
Kidney pain			
Yes	8	5.3	*<0.0001
No	144	94.7	
Anorexia			
Yes	106	71	*<0.0001
No	46	29	
Fall down			
Yes	10	6.6	*<0.0001
No	142	93.4	
General weakness			
Yes	61	40	*<0.0001
No	91	60	

*P value ≤ 0.05 = significant differences

This figure illustrate frequency of diseases causing ESRF. It was found that hypertension is the main cause of end-stage renal failure (26.5%), followed by diabetic nephropathy (19.3%), chronic pyelonephritis (12.0%), obstructive uropathy (7.2%), and glomerulonephritis (6.6%). While (18.7%) with unknown cause.

Table (2) found that More than three quarters (77.6%) come for dialysis with his/ her family member. More than half of the study sample (54%) had renal failure since 6 months to three years ago with (mean ± SD) duration (24.5±17.05) months Regarding the number of dialysis sessions, about three-quarters of patients (74%) went to dialysis three times per week. While the majority of patients (91.4%) spend 3 to 4 hours during each session.

Table 3: Shows distribution of patients according to their present complains. It was clear that (77.6 %) of elderly patients had Shortness of breath, (71%) had anorexia, (46.7%) had skin itching, (40%) had general weakness, (27.6%) had muscle cramp and (23%) had general edema. As a result of those problems (80.3%) of patients had impaired in their activity of daily living. There are insignificant differences between the studied sample psychological disturbances signs.

Table (4) illustrates that the majority of the sample (80.3%) can't do the usual daily activity and feeling fatigue regarding psychological status, more than three quarters (77.6%) isolated, (80%) were sad. Concerning social change (46%) don't communicate with the health team. According to patient relation with family, (76.3%) change to better. There are insignificant differences between studied sampler psychological disturbances signs.

Correlations

The above table estimated the relation of dialysis sessions on the physical and psychological status of ESRF elderly patients. It was found that there is a negative relation between the number of hemodialysis sessions per week and both acceptance of the disease and patient communication with the health team (r = - 0.007 and - 0.039 respectively). While positive relation between it and both activity of daily living and isolation respectively (r = 0.412 and r = 0.136). That means when the number of hemodialysis sessions per week increased, the activity of daily living impaired and patients' isolation increased, while both acceptance of the disease and patient communication with the health team decreased.

There are positive relation found between duration of dialysis session and both weakness and isolation (r = 0.274 and 0.063 respectively). That means increasing dialysis session time leads to more weakness and isolation of patients.

Concerning the relation between duration of disease and acceptance of it, there is a negative relation with significant differences (r = - 0.831and p <0.0001). While there is a positive relationship between the duration of disease and (isolation, relation with a family member and weakness respectively), (r = 0.063, r = 0.203 and r = 0.695 respectively). That reflects, in the long run, ESRF disease had a bad effect on elders' psychological status but increase family relations because of the feeling of near loss. Also, positive relation noted between weaknesses and absent of family member during dialysis.

There is negative relation between age & level of education and Acceptance of chronic renal failure with no significant differences (r = - 0.385 and r = - 0.127, respectively). That means when the patients getting older and had high level of education their acceptance of disease decreased. Otherwise, there is positive relation between sex and acceptance of disease.

Table 4: Psychosocial disturbance of ESRF elderly patients

Items	No. "152"	%	P-value
Isolation			
Yes	118	77.6	*<0.0001
No	34	22.4	
Acceptance of disease			
Accept the disease	30	20	*<0.0001
Not accept "sad"	122	80	
Communication with health team			
Communicated	82	54	*<0.0001
Not communicated	70	46	
Relation with family member			
Change to worst	8	5.3	*<0.0001
Change to better	116	76.3	
Not change	28	18.4	

*P value ≤ 0.05 = significant differences

Table 5: Person correlation of dialysis sessions on physical, and psychosocial status of ESRF elderly patients

Items	*"r"*	*P-value*
1- Number of hemodialysis session per week 2- Acceptance of disease	- 0.007	*<0.0001
1- Number of hemodialysis session per week 2- Communication with health teem	- 0.039	0.634
1- Number of hemodialysis session per week 2- Isolation.	0.136	0.095
1- Number of hemodialysis session per week 2- Disturbance of activity of daily living	0.412	*<0.0001
1- Duration of dialysis 2- Weakness	0.274	*<0.0001
1- Duration of dialysis session 2- Isolation	0.063	0.438
1- Duration of chronic renal failure 2- Acceptance of disease	- 0.831	*<0.0001
1- Duration of chronic renal failure 2- Isolation	0.063	0.438
1- Duration of chronic renal failure 2- Relation with family member	0.203	*0.012
1- Duration of chronic renal failure 2 Weakness	0.695	*<0.0001
1- Absent of family member during dialysis 2- Weakness	0.281	*<0.0001

*P value ≤ 0.05 = significant differences

Table 6: Correlation between Demographic data and acceptance of disease

Items	*"r"*	*P-value*
1- Age 2- Acceptance of disease	- 0.385	*<0.0001
1- level of education 2- Acceptance of disease	- 0.127	0.118
1- Sex 2- Acceptance of disease	0.107	0.190

*P value ≤ 0.05 = significant differences

DISCUSSION

The present study found (65%) from Egyptian elderly patients with ESRF aged between 60-<65, 27% had 65- <75 and only 8% had ≥75 years. This results in similar to the study of Kwork, et al., 2016 which found (67.2%) of ESRF Japanize elderly patients were aged ≥ 65 years. And also agree with the Study results of McClellan, et al., 2010 in the US population, which confirm that the mean (SD) age of ESRF elderly patients was 65.3 (9.4) years. Additionally, this study agrees with our study results which report mean (age ± SD) is equal to (65.6 ± 7.2 years). However, our study results disagree with Kwork, et al., 2016 study results which found (mean ± SD: 78.4 ± 7.0 years) and in agreement also with Loss, et al., 2003 study in dialysis unites in French which found the mean age ± SD was 76.2 ± 5.1. Increasing of mean of age of ENRF patients between japan & French and Egypt may reflect that the quality of health care facilities in Japan and French are more than in Egypt.

The present study confirms that 67.8% of ESRF elderly Egyptian patients were male and 32.2% were female. This agrees with a study results of Nagata, et al., 2010 in Japan, which found males develop ESRD higher than females. Also, agree with the study of Ghonemy, et al., 2016 in Egypt found 62.2% males and 37.8% females had ESRD. And also agree with Gerogianni, et al., 2019 found 96% male and 31% female. Furthermore, Ibrahim, and Wegdan,

2011,[7] found in their study which conducted in Cairo, that, men getting sick more than women concerning renal failure "55.7% and 44.3% respectively". Otherwise, the current results were in agreement with studies of Hill, et al., 2016 and McClellan, et al., 2010, they illustrated that, end-stage renal failure more prevalence in women than men.

Concerning marital status 81% of our studied sample was married, 0.6% were divorced and 18.4% were widowed. It agrees with the study results of Ibrahim and Wegdan, 2011, who found that the majority 75.4% from Egyptian patients with chronic renal failure were married, And. almost similar to Gerogianni, et al., 2019 who found (12%) of their sample were widowed.

As regards our study results concerning the duration of chronic renal failure in Egyptian elderly patients, it was found mean dialysis duration (30.1±19.3) months. It's almost similar to Ibrahim and Wegdan, 2011[7] who found, mean dialysis duration was (25.41±16.21 months).

McClellan, et al., 2010, estimated 13% from ESRF elder's patients had less than a high school education, 25.8% completed high school, 45.9% had some post-high school education and 16.0% reported professional education. It disagrees with our study results which found the majority of ESRF patients 77.5% had less than secondary school and only 8% had a university degree.

Our study found that (80.3%) of patients had impaired in their activity of daily living and needs assistance to perform it. These results are similar to the study performed by Gerogianni, et al., 2019they found (51.6 %) from ESRF patients had difficulty in performing work in and (62.8 %) from them making fewer activities than they would like in.

Regarding the physical burden of chronic kidney failure persons, (71%) from our studied sample suffering from anorexia, 38.8% nausea, 27.4% had a muscle cramp, general weakness in 40%, and shortness of breath in 77.6%. Many studies found a burden in the physical function of ESRF elderly patients but with different presents.

Georgianna, et al., 2019 found 57.4% of elder's patients had loss of appetite, 55.3% had nausea or stomach upset, and 45.4% had muscle pain. While Murtagh, et al., 2006 study illustrated the prevalence were fatigue/tiredness 71%, anorexia 49%, dyspnea 35%, and nausea 33%.

Given the high prevalence of falls in patients with ESRD and hemodialysis (HD) the associated morbidity and mortality in this population, it is imperative using adequate assessment tools to detect the risk and prevent falls in the elders under hemodialysis. In the current study, 6.6% from hemodialysis elderly patients complain fall. Although many studies showed a high incidence of falls in elderly patients on HD, there was wide variation in the published data. According to Abdel-Rahman, et al., 2011. falls rate lies between 38 and 47% in elderly patients under hemodialysis. This result had a high variation from our study results.

Our study estimated the presence of weakness in elders patients with ESRF to 40%. This comparable with study of Artom, et al., 2014[20] who estimated the prevalence of fatigue in advanced kidney disease patients ranges from 42% to 89%.

Few studies measuring acceptance of patients for chronic renal failure and dialysis, according to results of the study of Sesso, 1996, the rate of acceptance for dialysis was greater (94%) for patients in the 20-29 year and progressively decreased as patients got older. This agrees with our study results which found only 20% of elderly patients accepting their renal failure and dialysis. This may reflect elders angry and sadness from restrictions and limitations imposed by ESRD and dialysis and their role change in the family from one of independence to one of dependence.

A cross-sectional study performed in the Caribbean estimated that hypertension and diabetes were the common causes of ESRF. Soyibo et, al., 2007 .Our study illustrated leading cause of ESFR in ≥60 years old of Egyptian patients in EL-Minia city, it found the main cause of chronic renal failure was hypertension (26.5%) followed by diabetes (19.3%). These results agree with many studies in another governorate of Egypt and other countries of the world concerning the arrangement of causes of ESRF. They found hypertension followed by diabetes is the main cause of chronic renal failure with slight differences in disease percent Banaga et al., 2015, Lal et al., 2013, McClellan et al., 2010, Shaheen and Al-Khader , 2005.

Otherwise, Ghonemy, et al., 2016 in another Egyptian governorate reported diabetes is the main cause of ESRFD followed by hypertension (15.5% and 31.8% respectively). Also, other studies in different countries found diabetes is the first cause of ESRF disease in elderly people. Murtagh et al., 2007, Barreto, 2012 and Gallo-Ruiz et al., 2011

Concerning the unknown cause of ESRF current study found it in 18.7%, this coincides with

El Minshawy, 2001 who found it 18.1% in Cairo and similar with Ghonemy, et al., 2016 who found the unknown cause in 17.7% of cases. While in agreement with another study in the USA in which found uncertain causes represent 3.7% only.

Study results of Dhondup, et.al 2018, indicated that 12% of ESRF patients were suffering from obstetric uropathy, after a review of 100 random charts. This disagrees with our study results which found a history of obstetric uropathy among Egyptian ESRF elders patient in only 7.2 % of the study sample.

Additionally, our study estimated chronic pyelonephritis and glomerulonephritis as a primary cause of ESRF found them in a history of 12% and 6.6% of patients respectively. This opposes Ghonemy, et al., 2016 who found them in (8.8% and 3.7% respectively).

The current study found only 0.6% of ESRF Egyptian elder's patients have a previous history of Lupus. This disagreement with results of Bomback, 2018 and Tunnicliffe et. al., 2018 who reports that more than half of all patients with lupus will have clinically evident kidney disease during their disease course, and about 17% of patients with lupus will progress to chronic renal failure.

World Health Organization, depression is characterized by sadness, loss of interest or pleasure, disturbed sleep or appetite, feelings of tiredness and poor concentration. This agrees with current study results which found 77.6% from ESRF elder's patient was isolated and 80% were sad. Also, Khan, et al., 2019 estimated Prevalence and predictors of depression among hemodialysis patients in Malaysia in a prospective follow-up study, they found 74% from those > 60 had symptoms of depression in a baseline visit, 77.8% in the second visit, and 85.3% in the final visit.

Karadag et al. 2013 reported higher fatigue scores in patients who had started dialysis more recently. This results disagree with our study result in table 5, which found positive relation between feeling of weakness and duration of dialysis (r = 0.695). This differences may reflect worse of psychological status of Egyptian elders after years of dialysis.

Although some studies have failed to find a relationship between fatigue and social in hemodialysis patients. Also, Karadag et al., 2013 studied relation between social support and fatigue, they found that patients with severe fatigue perceived lower social support from family and friends. This agreement with our study results in table 5, which confirm positive relation between feeling of weakness and absent of family member during dialysis (r= 0.281).

Mok, and Tam, 2001, confirmed that the number of years on the dialysis program does not change coping behaviors significantly. This agree with current study results in table 5, which found negative relation between duration of chronic renal failure disease and acceptance of disease.

As shown in table (6) in current study results indicated a negative relation between aging and acceptance of diseases. This result confirmed by Logan, et al., 2006 they observed, a weak, negative relationship between age and coping mechanism. This designated that the oldest participants used fewer coping strategies with advanced chronic renal failure diseases.

Additionally, our study success to found a weak positive relation between sex and acceptance of disease (r= 0.107 and P-value = 0.190). While, Logan, et al., 2006 found no association between sex and uses of coping mechanism in ESRF geriatric patients.

CONCLUSION

Incidence and prevalence of End-stage renal disease (ESRD) are reportedly increasing all over the world, kidney failure is considered as a medical, social and economic problems to patients and their families. Patients with renal failure and undergoing hemodialysis are faced with many problems, which were decreased social activities, employment, economic difficulties, and social role disturbance. So, this study aimed to assess the physical and psychological status of ESRF elderly patients for giving basic data used to develop a health promotion program later.

Our study was carried out at two hospitals in El-Minia city. One hundred and fifty-two conveyances sample charring in this study. The researcher develops three tools and used in this study. The first tool; is a structured interview sheet that included socio-demographic data of patients. Second tool; questionnaire sheet developed to collect necessary data about the history of urination problems, etiology/ risk factors of disease. The third tool; was developed for gathering information about dialysis sessions, Physical and psychosocial status disturbances of ESRF elderly patients.

Study results confirm that Egyptian elderly male facing chronic renal failure more than females (67.8% vs. 32.2%). Hypertension and diabetes mellitus were the common causes of ESRF (26.5% and 19.3% respectively). The

majority of the sample (74%) do dialysis three times per week and the majority of them (91.4%) their time of session ranged from 3 to 4 hours. Egyptian ESRF elderly patients facing many physical disturbances such as impaired activity of daily living, shortness of breath, anorexia, and skin itching (80.3%, 77.6%, 71%, and 46.7% respectively). Additionally, they suffering from psychological problems such as sadness and isolation (80% and 77.6%).

Egyptian elderly patients with ESRF need special care, special diet, special dealing. Furthermore, they need financial assistance from the government, psychological support from their family and their community for coping with this dreaded disease. Ask my god to decrease their suffering and provide them Patience and acceptance.

CONFLICT OF INTEREST

Some of elderly patients have impaired decision-making capacity and depression which lead to refuse to participate in research studies.

Some of elderly patients suffers from sensory limitation related to aging as loss of hearing capacity which increase time for data collection.

Funding

This research didn't receive grants from any funding agency in the public, commercial or not-for-profit sectors.

ACKNOWLEGEMENT

The success and final outcome of this research required a lot of thanks for my God for assisting me to finish this work. Other thanks offer for directors, head departments and all nurses in hemodialysis units in hospital of El-Minia city. Additional thanks offered to clinical instructor Amal Ali in faculty of nursing in El-Minia University for her kind assistance in data collection. A lot of thanks for sprite of my mother, and all members of my family for their kind cooperation to end my research.

REFERENCES

Abdel-Rahman EM, Turgut F, Turkmen K, Balogun RA, October 2011. Falls in elderly hemodialysis patients. QJM: An International Journal of Medicine, Vol., 104, no., 10, PP 829–838, https://doi.org/10.1093/qjmed/hcr108.

Artom M, Moss M, Caskey R, Chilcot FJ, 2014. Fatigue in advanced kidney disease. Kidney International: Journal & Books, Vol., 86, 3, P.P 497-505. https://doi.org/10.1038/ki.2014.86.

Balogun SA, Abdel-Rahman S, 2019. Caring for Elderly Patients with Kidney Disease: The Geriatrician–Nephrologist Collaboration. Kidney News Online: Kipping the kidney community information.

Banaga SI, Mohammed BE, Siddig MR, Salama ED, el al., 2015. Causes of end stage renal failure among hemodialysis patients in Khartoum State/Sudan. BMC Research Notes, Vol. 8, no., 1, PP 1-7.

Barreto LG, et al., May 2012. Assessment of the psychological burden associated with pruritus in hemodialysis patients using the kidney disease quality of life short form. Quality of Life Research, Vol., 21, no., 4, PP 603-612. DOI:10.1007/s11136-011-9964-x.

Bomback AS, November 2018. An Update on Therapies for Proliferative Lupus Nephritis: How Certain Can We Be About the Evidence?. American Journal of Kidney Diseases, Vol., 72, no., 5, PP. 758-760.

Dhondup T, et al., 2018. Risk of ESRD and Mortality in Kidney and Bladder Stone Formers. American Journal of Kidney Diseases, Vol., 72, no., 6, PP 790-797, December.doi: 10.1097/01.EPX.0000399136.00486.4e.doi: http://dx.doi.org/10.2471/BLT.17.206441.

El Minshawy O, 2001. End-stage renal disease in the El-Minia Governorate, upper Egypt: An epidemiological study. Saudi J Kidney Dis Transpl, Vol., 22, PP 1048-1054.

El-Moselhy EA, 2016. Aging: The Current Situation Globally and in Egypt. J Gero Geri Res, Vol5, doi:10.4172/2167-7182.1000e141.

Gallo-Ruiz L, Sennet CM, García-Urbina A, 2011. Prevalence and Risk Factors for CKD

Among Brickmaking Workers in La Paz Centro Nicaragua. Amirican Journal of Kidny disease, Vol., 74, no., 2, PP 239-247.

Gerogianni KS, Babatsikou PF, 2014. Psychological aspects in chronic renal failure. Health Science Journal, Vol.,8, no.,2, PP 205-214.

Gerogianni S, Babatsikou F, Gerogianni G, et al., September 13 2019. concerns of patients on dialysis: a research study. Health Science Journal.

Ghonemy TA, Farag SE, Soliman SA, et al., 2016. RENAL DATA FROM THE ARAB WORLD: Epidemiology and risk factors of chronic kidney disease in the El-Sharkia Governorate, Egypt. Saudi Journal of Kidney Diseases and Transplantation, Vol., 27, no.,1 PP 111-117.

Hill NR, Fatoba ST, Oke JK, et al., 6 Jul 2016. Global Prevalence of Chronic Kidney Disease – A Systematic Review and Meta-Analysis. US National Library of Medicine :National Institutes of Health, doi: 10.1371/journal.pone.0158765.

https://doi.org/10.1111/j.1365-2648.2006.04015.x, Saudi Digital Library.

Ibrahimand JM, Wegdan OM, 2011. Epidemiology of sleep disorders in patients with chronic renal disease in Cairo, Egypt. The Journal Of The Egyptian Public Health Association, Vol., 86 no., 3:4 PP 68-72.

Karadag E, Kilic SP, Metin O, 2013. Relationship between fatigue and social support in hemodialysis patients. Nurs Health Sci, Vol., 3, P.P 12008. View Record in Scopus Google Scholar.

Khan A, Khan AH, Adnan AS, et al., 2019. Prevalence and predictors of depression among hemodialysis patients: a prospective follow-up study. BMC Public Health, vol., 19, no., 531.

Kim HR, Son GR, 2005. Fatigue and its related factors in Korean patients on hemodialysis, Taehan Kanho Hakhoe Chi, 35, p.p 701-708. Cross Ref View Record in Scopus Google Scholar.

Kwok WH, Yory SP, Kwok OL, October 2016. Outcomes in elderly patients with end-stage renal disease: Comparison of renal replacement therapy and conservative management. Hong Kong Journal of Nephrology, Vol., 19, PP 42-56, https://doi.org/10.1016/j.hkjn.2016.04.002.

Lal C, Haider S, Shah Z M, et al., Jul-Dec 2013. Frequency of depressive disorder in patients with chronic renal failure on maintenance hemodialysis in a tertiary care hospital, Karachi. Journal of Pakistan Psychiatric Society, Vol., 10, no., 2, PP 91-95 & PP 5.

Logan SMM, Hippert P, Hotgins M, 2006. Stressors and coping of in-hospital hemodialysis patients aged 65 years and over, J A N : Wily Online Library. Vol., 56, no.,4,

Loos C, Briançon S, Frimat L, et al., 31 January 2003. Effect of End-Stage Renal Disease on the Quality of Life of Older Patients, Journal of American Geriatric society, https://doi.org/10.1046/j.1532-5415.2003.51062.x.

Luyckx VA, Tonelli M, Stanifer JW, 2018. Policy & Practice: The global burden of kidney disease and the sustainable development goals. Bulletin World Health Organization, vol., 96, PP414-422D.

Mallappallil M, et al. 2014. Chronic kidney disease in the elderly: evaluation and management. Clin Pract (Lond); vol.11, PP 525–535.

McClellan WM, Abramson J, Newsome B, Temple E, et al., 2010. Physical and Psychological Burden of Chronic Kidney Disease among Older Adults. American Journal Nephrology, Vol., 31, no., 4, PP 309–317.

McClellan WM, Abramson J, Newsome B, et. al., 2010. Physical and Psychological Burden of Chronic Kidney Disease among Older Adults. Am J Nephrol. Vol., 31, no., 4, PP 309–317.

Mok E, Tam B, 21 December, 2001. Stressors and coping methods among chronic hemodialysis patients in Hong Kong. Journal of clinical nursing, First published, https://doi.org/10.1046/j.1365-2702.2001.00500.x, Cited by: 54, Saudi Digital Library.

Murtagh F, Addington-Hall J, Higginson IJ, January 2007. The Prevalence of Symptoms in End-Stage Renal Disease: A Systematic Review. Advances in Chronic Kidney Disease, Vol., 14 no., 1, PP 82-99.

Nagata M, Ninomiya DTY, et al., 2010. Trends in the prevalence of chronic kidney disease and its risk factors in a general Japanese population: The Hisayama Study. Nephrol Dial Transplant, Vol., 25, PP 2557-2564.

Sesso RP, Fernandes PF, Ancao PF, et al., 1996. Acceptance for chronic dialysis treatment: insufficient and unequal. Nephrol Dial Transplant, Vol., 11, PP 982-986.

Shaheen FA, Al-Khader AA, 2005. Epidemiology

and causes of end stage renal disease. Saudi Journal Kidney Disease, Vol.,16, PP 277-281.

Smith SR, Soliday E, 2001. The effects of parental chronic disease on the family. Fam Relat, Vol.,50, PP 171-177.

Soyibo AK, et, al., 2007. Barton Caribbean renal registry data. West Indian Med J, Vol., 5, PP. 45-51.

Spiridi S, Iakovakis A, Kaprinis G, 2008. Renal insufficiency. Biological and psychosocial consequences Psychiatry, Vol.,19, PP 28-34.

Steenkamp R, Castledine C, Feest T, Fogarty D, 2011. UK Renal Registry 13th Annual Report (December 2010): Chapter 2: UK RRT prevalence in 2009: National and Centre-specific analyses. Nephron Clinic Practice, Vol.,119, no., 2:c, PP. 27-52.

Tunnicliffe DJ, Palmer SC, November 2018. Immunosuppressive Treatment for Proliferative Lupus Nephritis: Summary of a Cochrane Review. American Journal of Kidney Disease, Vol., 72, no., 5, PP 756-757, doi: 10.1053/j.ajkd.2018.07.008

U.S, 2014. Renal Data System. Annual Data Report: Epidemiology of Kidney Disease in the United States, National Institutes of Health. National Institute of Diabetes and Digestive and Kidney Disease, Bethesda, MD, Web site. Available at: http://www.usrds.org/adr.htm, 2014.

United Nations Department of Economic and Social Affairs: Population Division. Egypt Population. 1st of January 2019. Egypt Population clock (live): Egypt age structure and life expectancy.

US Renal Data System, 2011. USRDS. Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases. Bethesda, MD.

WHO report, 2018. Retrieved from http://www.who.int/news-room/fact-sheets/detail/depression.

Williams AG, Crane PB, Kring D, 2007. Fatigue in African American women on hemodialysis. Nephrol Nurs J, Vol.,34, p.p. 610-617. View Record in Scopus Google Scholar.

Zahran A, 2011. Epidemiology of hemodialysis patients in Menofia governorate," delta region, Egypt. Menoufia Medical journal, Vol., 24, PP 211-220.