ORIGINAL ARTICLE

Factors Affecting Survival and Quality of Life of patients after Haemodialysis Treatment

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ABSTRACT

Aim: To find out the factors affecting patient's quality of life and survivals who met dialysis treatment.
Study Design: Cross-sectional study.
Place & Duration: This study was conducted at Department of Nephrology, Shaikh Zayed Hospital, Lahore from 1st January 2018 to 30th June 2018.
Methods: One hundred patients who met the dialysis treatment for 3 months and more than 3 months were included. Mean age calculated 40 to 60 years. After taking written consent from all the patients, detailed medical history, age sex, socio-economic status was examined. The quality of life indexes were calculated using the WHOQOL questionnaire.
Results: Fifty eight (58%) patients were men while 42% patients were women, 30 (30%) patients were ages between 40 to 45 years, 35 (35%) patients had ages 46 to 50 years and 35% patients had ages > 50 years. Forty (40%) patients were on haemodialysis for more than 6 months, 8% patients were died during 1st year of dialysis treatment and all had a poor QOL. All the patients were examined by 4 different domains. Found no difference in QOL between the domains except for category (domain) 3 (social economic/relationship) of the patients which was better QOL than others. Non diabetic patients had good QOL/healthy condition in category (domain) 2 (psychological health) than diabetic patients.
Conclusion: We found that QOL of haemodialysis patients was bad as emulate to their carers because of diabetic, Dialysis duration had a reverse interaction with quality of life. Survival of patients depends on their health condition and factors affecting their life during dialysis treatment.
Keywords: QOL, Renal dialysis, Haemodialysis, Diabetes, Vascular diseases, Infection

INTRODUCTION

Data from community base studies in Pakistan disclose in a disturbing way of chronic kidney disease. Now a day's most haemodialysis patients ages are 40 to 60 years and approx 15% to 20% are 40 years age and all have less estimated glomerular filtration rate[1], hypertension nephropathy and main factor of death of patients on haemodialysis is their diabetic status, infections and malligancy[2]. Pakistan has approximately 150 patients annually with ESRD (end-stage renal disease) on 10 lacs population, therefore, every year we have 16000 patients of ESRD.[3] The cost of maintenance haemodialysis is 150000 to 200000 per patient per anum. In Pakistan Gov spend only 0.6% on health as compared to developed countries with 10 to 15% on health[4].

In Pakistan nephrology services are in the establishment state. In current years we found an improvement among people to know about kidney diseases. In Pakistan the nephrologists faculties is too short for approx 200 million population (compared to the USA with more than 5 thousand nephrologists for a population about three hundred million).[5] In Pakistan only 40% of the patients have access to maintain dialysis services because shortage of faculties and facilities of dialysis services in public hospitals. Most of the patient who met haemodialysis treatment is under dialyzed. About 63% get dialyses two times a week, survival of patients during dialysis treatment (.5 to two year) is 41% but we found evenly poor QOL in these patients of haemodialysis[6-9].

There are many factors, conditions that affect healthy life and survival of dialysis patients. The main factors affecting healthy life or quality of life are the causes of ESRD[10-12].

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PATIENTS AND METHODS

The cross sectional study was held on patients on haemodialysis for more than three months at Shaikh Zayed Hospital, Lahore from 1st January 2018 to 30th June 2018. One hundred persons were included as matched for age, gender, socio-economic status with normal kidney functions as controls from among caregivers of the ESRD patients.

Data collected by Demographic data source that was included age, gender, causes of ESRD, social economic status, residence, physical health, social relationship, education, dialysis data frequency and duration of dialysis treatment. Patient's investigation by individually to examined any difference in results pretentious by these factors. Using special formulate survey form of quality of life measured by the WHO BREF.[8] Four different categories are used, 1 physical health, 2 social economic/relationship, 3 psychological health, 4 environment. The QOL questionnaire of each category was emulate to one another to determine which category's patients were better health on dialysis treatment duration with ESRD patients. Data collected from WHQOL-BREF was analyzed by using SPSS 19.0 software. Data was analyzed by

mean±standard deviation. P value was considered is less than ≤0.05.

RESULTS

Table 1: Demographical details of all patients

Variable	No.	%age
Haemodialysis patients		
Men	58	58.0
Women	42	42.0
Age (years)		
40-45	30	30.0
46-50	35	35.0
> 50	35	35.0
Residency		
Urban	30	30.0
Rural	70	70.0
Educational status		
Literate	45	45.0
Illiterate	55	55.0
Income (rupees)		
<30000	70	70.0
>30000	30	30.0
ESRD causes		
Vascular disease	30	30.0
Diabetic mellitus	50	50.0
Others	20	20.0
Duration of dialysis (months)		
>8	40	40.0
<8	60	60.0
Per week dialysis		
1	25	25.0
2	58	58.0
3	17	17.0

Amongst 100 patients on haemodialysis, 58 (58%) patients were men while 42% patients were women, 30 (30%) patients were ages between 40 to 45 years, 35 (35%) patients had ages 46 to 50 years and 35% patients had ages >50 years. 40 (40%) patients were on haemodialysis for more than 8 months and 60% were < 8 months, 8 (8%) patients died during first year of dialysis treatment. 70 (70%) were resident of urban area, 45% patients were literate while 55% were illiterate. 60% patients had income <35000/month (Table 1). Causes of end stage renal disease was noted such as vascular disease, Diabetic mellitus and others as 30%, 50% and 20% respectively. 25% patients were getting 1/week dialysis treatment, 58 % patients were getting 2/week dialysis treatment and 17% were getting 3/week dialysis treatment. We found no major variation values according to the WHOQOL BREF in quality of life among categories except for category 3 which was better than other. Non diabetic patients have better QOL in category 3 (psychological health) compared to diabetic patients shows in Table 2.

The factors affecting quality of life was literacy level, rural residency, income, depression and joint family system and we noted the values related to poor quality of life was 48/70 had rural residency, 35/55 were illiterate, 48/70 had income less than 30000/month, 42/52 had depression problem and 18/30 patient had joint family system (Table 3).

Table 3: Factors affecting quality of life of patients

Variable	Better QOL	Poor QOL
Residency		
Urban	13	17
Rural	22	48
Educational status		
Literate	25	20
Illiterate	20	35
Income (rupees)		
<30000	22	48
>30000	10	20
Family system		
Depression	10	42
Joint family	12	18

Table 4: Mortality rate among all the patients during 1st year of dialysis treatment

Characteristics	No.	%age
Yes	14	14.0
No	86	86.0

Table 2: Quality of life of patients according to the WHOQOL

Characteristics	Environment	Psychological health	Social economic/ relationship	Physical health
Haemodialysis patients				
Men	23.24±6.24	21.24±6.24	24.24±6.24	21.24±6.24
Women	22.37±2.38	20.37±2.38	21.37±2.38	23.37±2.38
Older than 45 year	21.52±5.23	21.52±5.23	22.52±5.23	20.52±5.23
Died in 1st year	8.28±2.10	8.28±2.10	8.28±2.10	8.28±2.10
ESRD Causes				
Vascular diseases	26.34±4.47	24.24±4.47	25.34±4.47	25.34±4.47
Diabetic mellitus	23.54±2.68	22.54±2.68	24.54±2.68	22.54±2.68
Duration of dialysis (months)				
>8	22.72±2.78	21.72±2.78	21.72±2.78	21.72±2.78
≤8	23.81±4.64	22.81±4.64	22.81±4.64	22.81±4.64
Per week dialysis				
1	22.56±2.57	22.56±2.57	22.56±2.57	22.56±2.57
2	23.85±4.42	23.85±4.42	23.85±4.42	23.85±4.42
3	25.54±4.26	25.54±4.26	25.54±4.26	25.54±4.26

DISCUSSION

End-stage renal disease has serious effects on the patients Quality Of Life. It affects negatively on their social economical, financial, psychological well-being. It affects directly patients Quality Of Life than heart failure, diabetic mellitus, and chronic lungs disease.[13] The first report of

quality of life of patients on haemodialysis in Pakistan where end stage renal disease patients have annually a higher mortality than patients in western countries.[14] In our study, quality of life is poor in all categories 1, 2, 3 and 4 respectively, except for the environment category, Because in any country environment plays an important role for involving in any disease. These results shows the similarity to the other study in which QOL of haemodialysis patients reported poor according to the points demonstrated by WHO quality of life of haemodialysis patients.[15] Another study reported that there was no significant difference found in all categories except the environmental effects[16], It is reasonable that they have the same level of quality of life in environmental category. Found no difference in the frequency of patients in three categories except environment. Moreover, we have to do more research on how social economics/social relationship, financial status, their activities, their works and most important dialysis facilities affected patient's quality of life.

We observed that the factors affecting quality of life was literacy level, rural residency, income, depression and joint family system and we noted the values related to poor quality of life was 48/70 had rural residency, 35/55 were illiterate, 48/70 had income less than 30000/month, 42/52 had depression problem and 18/30 patient had joint family system. We observed that all these factors was the major reasons of poor quality of life of patients whom were on haemodialysis. These results shows similarity to some other studies in which financial status and rural area residency was the major factors affecting quality of life of ESRD patients[17]. Joint family system could be the other reason for affecting the patient's quality of life and also on rural areas patients who have less facilities of life and literacy level of than urban areas. We observed that most of the patients whom were receiving dialysis treatment belongs to the poor class, only few patients of that hospital who receiving dialysis treatment had an income of 30000/month.

In our study, we observed that depression was the important factor that affects the quality of life of patients. We observed the main reason affecting haemodialysis patients is diabetes mellitus followed by hypertension and vascular diseases, which were same to other international studies[18,19]. Many organs of the body affected by diabetes mallitus, It causes kidney failure, Chronic kidney disease, cardiovascular, peripheral vascular diseases and cause eye vision problem, All were leading to surgical and weakened or damage physically. All these issues causes due to less work and volume of work, usage of anti-diabetic drugs for multiple years, unsettled sleep schedule, all are affecting health physically. Same ornamentation of bad quality of life in dialysis patients is seen in different studies[19,20]. We found that, for haemodialysis patients the vascular access was not connected with quality of life.

CONCLUSION

We found that quality of life and survival of dialysis patients were bad as compared to their controls (carers/healthy individuals). The HRQOL questionnaire at Shaikh Zayed Hospital, Lahore was good experience as emulate to other health care centers. Our result shows diabetic patients had poor quality of life. Period of dialysis had a retract interaction with QOL.

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