



Evaluation of the Incidence of Psychiatric Disorders in Dialysis Patients: Cross-Sectional Study

Maryam Farjamfar¹, Ehsan Binesh¹, Dina Moazamian¹, Sina Mousavi², Mojtaba Nasiri^{1*}

¹ School of Medicine, Shahroud University of Medical Sciences, Shahroud, Iran.

² School of Medicine, Islamic Azad University of Shahroud, Shahroud, Iran.

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Abstract

Background: Psychiatric problems are an important concern in chronic illness such as chronic kidney disease. Knowing the frequency of psychiatric disorders may be helpful for improving quality of life in dialysis patients. This study was performed to evaluate psychiatric disorders in patients with chronic renal failure under treatment with dialysis from February 2013 to February 2014 in Shahroud, Iran.

Methods: In this cross-sectional descriptive comparative study, 98 dialysis patients were enrolled and psychiatric disorders were determined by SCL-90-R questionnaire.

Results: The results demonstrated that 33 patients (33.7%) had psychiatric disorders, of which 18 patients had major depressive disorder, six had anxiety disorders, six had psychotic disorders and one case having paranoid thoughts, one patient had obsessive compulsive disorder (OCD), and one patient had phobia disorder.

Conclusions: Totally, according to the obtained results in this study it may be concluded that nearly one-third of dialysis patients have psychiatric disorders, with most of these being major depressive disorder.

Keywords: Psychiatric disorder, Chronic renal failure, Dialysis.

*Corresponding to: M Nasiri, Email: nasirimed@yahoo.com

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Introduction

Patients with chronic and incurable diseases are frustrated because of the difficult nature of the diseases, which include multiple disorders and mental health problems.¹ Mental disorders faced by patients with chronic diseases include: depression; anxiety; anger; guilt; suicidal thoughts and cases of suicide; feelings of loneliness and isolation; cognitive disorder; sexual dysfunction; addiction; denial of illness; lack of control.¹ During recent years, more attention has been paid to non-renal symptoms of end-stage renal disease (ESRD).²⁻⁴ Chronic renal failure is an irreversible process that results in electrolytic and metabolic imbalance such as metabolic acidosis, anemia and uremia.¹ There are some major reasons for this condition like hypertension, diabetes, glomerulonephritis, etc.^{5,6}

The psychological manifestations of renal failure were described by Addison in 1868 in his classic monograph on kidney disease.^{7,8} The most common presentation of uremic patients is fatigue and drowsiness.^{7,9,10}

Patients with ESRDs are appropriate candidates for substitute renal function. Hemodialysis was the first treatment designed for this purpose.¹¹

Patients with end-stage renal ailment much of the time need adjusting to their dependence on a dialysis machine to stay alive. Modification of behavior is needed in cognitive, behavioral, and emotional terms by patients and their families.^{7,12,13} The adjustment happens over weeks and months and may be compared to a distress response with depressive side effects.^{7,14-17} Hemodialysis has a ruinous effect on quality of life because of its limitation and changes in psychological and physical situations.¹⁸ The personal satisfaction of patients obliging dialysis is influenced by progressions in their lifestyle for themselves and specially for their relatives. In the meantime, physical well-being, working, individual and social connections, and financial status of these patients are enormously influenced by their situations.¹⁹⁻²¹ In a research study,²² it was shown that gradual changes in mental and emotional conditions of patients under hemodialysis results in the following modifications: doubtful future and reliance on medical health workers, drugs and machinery systems.² Restrictions in patient control and independence result in their reduced quality of life.³ The major cause of their aggravation is their dependence on the continued dialysis process. Generally, this condition influences their family and social relationships.² One of the common prolonged complications of ESRD is damage of self-image. Self-confidence and image are two aspects of quality of life.²³ The body image of dialysis patients is damaged because they feel that they are not attractive.²⁴

In a study designed by Genestier et al., they debated the necessity of a "holistic assessment tool" that enabled careful attention to be paid to psychological aspects of self-image. Because of erectile dysfunction in some patients, these patients have some sexual problems and this slowly injures their private relationships.^{25,26}

Regarding the above-mentioned, in this study we describe the psychiatric disorders of patients on dialysis.

Materials and Methods

This study was a cross sectional study that evaluate patients under dialysis treatment who had recourse to the nephrology unit of general hospital of Islamic Azad University of shahroud from February 2014 to 2015. After the study was approved by the ethics committee of Shahroud University, an instructional booklet for data collecting was distributed. It was explained to all of patients that their information would only be used for research purposes. Inclusion criteria for participants were: patients had been undergoing dialysis, stable clinical situation ability to perform all measurements and complete questionnaires that needed. The SCL-90 questionnaire needed

just 10-20 minute for completion. Patients were excluded if they were not willing to complete the questionnaire or all other interfering conditions such as failing eyesight, language disabling disorders and mental diseases (preexisting dementia or confusion, and various mental disorders).

Demographics and comorbid conditions were recorded, including age, sex, job status, education level, marital status, duration of treatment with dialysis, number of dialysis treatments in a week, duration of kidney disease.

Diagnoses of psychiatric disorders were made by using the symptom checklist (90SCL-90) which is a psychiatric self-reports questionnaire. Items in this checklist includes: Somatization, Obsessive-Compulsive, Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation, Psychoticism.

This questionnaire required only a short explanation by a nurse or clinical interviewer, but patients needed more time to ask questions. Studies 27,28reported the internal validity of this test using satisfactory alpha coefficient (the highest scales for depression was 0.95 and the lowest was 0.77). The validity of the questionnaire with the highest correlation for the depression scale was 0.73 and the lowest for the fear scale was 0.36. The questionnaire is used for screening and evaluation of mental situation in all of the word.

Information was analyzed using descriptive and inferential statistics (Chi square test and Fisher’s exact test) and editing was conducted in SPSS software version 13. In interpretation of results, 0.05 were considered a statistically significant level.

Results

Ninety-eight patients with ESRD who were receiving dialysis were enrolled in this study. The demographic profile of patients (table 1) shows that most of the patients were males (N=59, 60.2%), compared with females who were N=39, 39.8%. About 66.3 % (N=65) of patients were older than 40 years. Most of them, about 57.1% (N=56), were unemployed, and 76.5% (N=75) were married. Education level was investigated and 34.7% (N=34) had a higher education level than high school diploma, 36.7% (N=36) had a diploma, and 28.6% (N=28) had no diploma.

Table 1. Frequency of demographic profile

Demographic Profile	Frequency (percent)
Age	
- Under 40 years old	33 (33.7%)
- Over 40 years old	65 (66.3%)
Gender	
- Male	59 (60.0%)
- Female	39 (40.0%)
Job Status	
- Employed	42 (42.9%)
- Unemployed	56 (57.1%)
Marital Status	
- Single	23 (23.5%)
- Married	75 (76.5%)
Educational Level	
- <Diploma	28 (28.6%)
- Diploma	36 (36.7%)
- >Diploma	34 (34.7%)

The duration of kidney disease was studied. The results showed that most of the patients (53.1%, N=52) were under dialysis for less than one year and 46.9% (N=46) were under dialysis for more than one year. Forty-nine per cent of patients (N=48) had dialysis three to four times a week. Overall, 33.7% of patients (N=33) were diagnosed with psychiatric disorders, of which 18 had major depressive disorder, six had anxiety disorders, six persons had psychotic disorders, and one case had paranoid thoughts, one patient had OCD, and one patient had phobia disorder (table 2).

Table 2. Type and frequency of psychiatric disorders in participants

Type of disorder	Frequency (percent)
Major depressive disorder	18 (54.54%)
Anxiety disorder	6 (18.18%)
Psychotic disorder	6 (18.18%)
Paranoid thoughts disorder	1 (3.03%)
Obsessive compulsive disorder	1 (3.03%)
Phobia disorder	1 (3.03%)

There was no relationship between age/sex of patients and presence of psychiatric disorders (P=0.11).

There was no significant difference in mental disorders among the married or single populations (P=0.23), on the other hand mental illness was more common in patients with education levels lower than diploma (P=0.002).

As mentioned in table 3, in patients with longer duration of dialysis, more of a relation with psychiatric disorders was found (P=0.005), with most of these patients undergoing dialysis for more than one year, but there is no meaningful relationship with psychiatric disorders in patients undergoing dialysis more than once a week. Just 18 patients of 48 patients having dialysis treatments three to four times a week had mental disorders (P=0.31). Duration of renal dysfunction was analyzed and results showed that psychiatric disorders increased duration of renal dysfunction; 47.8% of patients undergoing dialysis for more than one year (N=22, P=0.005) were diagnosed with mental illnesses.

Table 3. Dialysis variables and psychiatric disorders

Dialysis Variables	Psychiatric disorders		P.V
	Positive	Negative	
Dialysis duration			
- <1year	8 (17.0%)	39 (83.0%)	P>0.05
- >1year	25 (49.0%)	26 (51.0%)	
Number of dialysis Treatments/week			
- 1-2	15 (30.0%)	35 (70.0%)	
- 3-4	18 (37.5%)	30 (62.5%)	
Duration of kidney disease			
- <1year	11 (21.2%)	41 (78.8%)	P=0.05
- >1year	22 (47.8%)	24 (52.2%)	

Discussion

Chronic kidney disease is one a serious issue in health systems around the world.²⁹ Psychiatric disorders are common among patients with CKD. This disease has inconstant prevalence in different reports all around the world. In variable studies the prevalence is 30%.⁷

The current study showed the disturbance of psychotic disorders in the dialysis population. It was observed that 33

people out of 98 ones had psychological disorders, including 18 patients with major depression, six patients with anxiety disorders, six patients with psychotic disorders, one patient with paranoid thoughts, one patient with OCD, and one patient with phobia disorder. Unemployment, level of education, longer duration of dialysis, and longer period of kidney disease has significant relationship with psychotic disorders. These findings confirm that CRF and process of dialysis have a significant effect on mental status of patients. In a study done by Preljevic et al. with the title “Study of depression and anxiety in dialysis patients in Norway”, they specified, according to diagnostic test SCID-1 in 109 patients, that 22% of patients were with depression disorders and 17% with anxiety disorders, which indicated that the abundance of depression disorders in dialysis patients is more than for other psychological disorders, same as the findings of the present study.³⁰ In another study by Daniel Cukor et al. that evaluated anxiety disorders in patients under hemodialysis treatment in the US, it was found that 45.7% of a total of 70 patients had anxiety disorders and 40% had mood disorders.³¹ This contradicted our results, which showed that incidence of mood disorders was three times higher than that of anxiety disorders. There are differing results regarding number of dialysis patients with psychiatric disorders. We found that there is a straight relationship between number of dialysis treatments in a week and mental illness. In this study, there was no significant relationship between duration of dialysis and mental disorders, which coincides with an article written by Chung et al.³² investigating major depression in end-renal disease, that showed that there is no relationship between duration of dialysis and mental disorders. In another study by Camacho-Alonso et al., it was also reported that there is no relationship between duration of dialysis and depression and anxiety levels of patients.³³ One study with title of “depression and anxiety in patients with chronic renal failure: the effect of socio demographic characteristics” has indicated that depression and anxiety are high in Athens, Greece population.³⁴ Some experts believe that there are more serious psychological reactions at the start of dialysis, so that transient psychotic reactions may sometimes be seen in the early stages, but with the passage of time, compatibility with hemodialysis arises.³⁰

This study has been useful for comprehension of the distribution of psychiatric illnesses among chronic kidney disease patients who undergo dialysis. In summary, based on the results of this study, it was concluded that about one-third of CKD patients suffer from psychiatric disorders and the most common of these disorders is depression. Psychosocial support of dialysis patients is very important. For that reason we should individually evaluate each patient for her/ his requirements. It is better to start this evaluation and our intervention at the beginning of the diagnosis and with special focus on patients’ social and psychotic situation to help them to be more adaptive with new methods of life. Healthcare professionals have a duty to help patients adapt to their limitations in the results of dialysis and to encourage them to look after their own health concerns.

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Conflict of Interest

The authors declared that they have no conflict of interest.

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