

AN ANALYSIS OF PSYCHIATRIC MORBIDITY IN CHRONIC RENAL FAILURE PATIENTS ON HAEMODIALYSIS IN A TEACHING TERTIARY CARE HOSPITAL**¹Dr. Y. Arulprakash Md., ²*M. B. Abdul Rahuman, Dr. Kokila and Dr. G. Ramanujam**¹Associate Professor of Psychiatry, Kanyakumari Medical, College Hospital.²Assistant Professor in Psychiatry, Tirunelveli Medical College.***Corresponding Author: M. B. Abdul Rahuman .**

Assistant Professor in Psychiatry, Tirunelveli Medical College.

Article Received on 13/07/2018

Article Revised on 03/08/2018

Article Accepted on 24/08/2018

ABSTRACT

Background: Recently there is a rise in the global burden of chronic kidney disease. In India there is much more burden due to increased life expectancy and a rise in type-2 diabetes mellitus in population. Patients with Chronic renal failure with End stage renal disease have to depend on renal replacement therapy for their survival. ESRD is a multifaceted problem having medical and psychological consequences. Psychiatric problems like depression and anxiety are especially common among ESRD patients being treated with haemodialysis. **Aim:** The aim of this study was to find out the prevalence of psychiatric morbidity among ESRD patients who are being treated with haemodialysis. **Material and Method:** A cross sectional study of 100 patients in and around Tirunelveli to evaluate the association and prevalence psychiatric morbidity in ESRD patients using the Mini-International Neuropsychiatric Interview (M.I.N.I) 6.0 as a screening tool to diagnose mental illness in those patients. The data was analysed using SPSS version 21. **Result & Conclusion:** Psychiatric morbidity was found in 45% of the study population. Depression was the most common psychiatric illness found followed by dementia and delirium. **Conclusion:** Patients on haemodialysis should be routinely screened for psychological disturbances and psychiatric morbidity to diagnose underlying mental illness at least once in every six months.

KEYWORDS: Psychiatric morbidity, End Stage Renal Disease (ESRD), Haemodialysis.**INTRODUCTION**

ESRD represents a clinical state or condition in which there has been irreversible loss of normal renal functions, of a level enough to make the patient permanently dependent upon renal replacement therapy (dialysis or transplantation) in order to avoid life threatening uraemia.^[1] Patient has to depend on machine and health care professionals for their life, no other medical illness is as debilitating as ESRD.^[2] Psychiatric issues could be seen in patients with chronic kidney disease (CKD) on haemodialysis. Haemodialysis is the most preferred treatment method for CKD. However, it has been insisting that a number of restrictions and modifications accompany this treatment, which have a devastating impact on the quality of patient's life and affect individual's psychological and physical well-being.^[3] CKD although primarily a physical illness, it has associated psychological stress and illness. Patients on dialysis are in a circumstance of complete dependence on the machine, no other therapeutic condition has such an extent of reliance for the support treatment of a chronic disease. Patients with renal failure regularly experience the ill effects of multiple comorbidities and are on numerous prescriptions. A number of these drugs might cause psychiatric side effects, and sometimes agitation and confusion may be noted as a consequence of non-

psychiatric drugs.^[4] The psychological manifestations of renal failure were described by Addison in 1868 in his classic monograph on kidney disease.^[5] The most common initial complaints of the uremic patient are fatigue, drowsiness and the inability to concentrate for long periods. This impaired functioning is an early and sensitive indication of brain dysfunction appearing prior to neurological symptoms. Those delirious psychoses may arise even in the early stages of the alteration of consciousness, but increase in frequency occurs along with the deterioration of the general mental state. The neuro-psychiatric changes are mostly related with blood urea levels. Patients with end-stage renal ailment need to attempt to adjust to a ceaseless physical disorder and the need much of the time of adjusting to dependence on a dialysis machine to stay alive. Modification in cognitive, behavioural and emotional terms is needed by patients and their families.^[6] Numerous treatment-related stress factors are present in addition to the changes associated with a declining glomerular filtration rate.^[7] The experience of dialysis can be very destructive for both the individual with the disease and that individual's family, resulting in a life that is greatly narrowed in scope with increased dependency on one's partner. Depression is the most common psychiatric abnormality seen in patients on dialysis and has been demonstrated to

be the strongest predictor of quality of life. In one study, 20% of dialysis patients reported the presence of suicidal ideas.^[8] The various psychiatric consequences associated with haemodialysis can vary from treatment non adherence to increased mortality, Hence our aim was to analyse the prevalence of psychiatric morbidity in a group of ESRD patients who were on haemodialysis in a tertiary teaching care hospital.

MATERIAL AND METHODOLOGY

This study was undertaken in the Outpatient department of Psychiatry of Tirunelveli medical college and hospital after approval from the institutional ethics committee. The study was conducted over a period of 12 months. ESRD patients on maintenance haemodialysis in the age group of 18-75 years were selected for the study. Patients who were not in clear sensorium and unable to give consent were excluded from the study. The study population consisted of 100 ESRD patients on maintenance haemodialysis. A patient proforma was prepared for collecting the demographic details, medical history and the mental status examination of these patients. The study subjects were then screened using the

Mini-international Neuropsychiatry interview English Version 6.0.0 to identify psychiatric morbidity. The data obtained was pooled, tabulated and subjected to statistical analysis using the SPSS Version 21.0.

RESULTS

The demographic profile of the patients show that most of the patients attending haemodialysis were male (n= 68, 68%) compared to females (n=32, 32%). The mean age of patients undergoing haemodialysis were 51 years±11.2, and the mean age of male was 53.90 years±10.1 and female were 48.11 years±11.65. Most of them belonged to age group of 40-60 years.

Duration of renal dysfunction was studied. The results showed mean 3.56 years± 1.92. Majority of the patients (n=83, 83%) had undergone dialysis for <5 years out of which mostly males (N = 58) and rest being females. In our study about 45% of patients were diagnosed with psychiatric illness, among which 31 patients were male and rest were female patients. There was no statistically significant association between sex and psychiatric diagnosis.

Table 1: Psychiatric morbidity and type.

PSYCHIATRIC ILLNESS	NO OF PATIENTS	PERCENTAGE
PRESENT	45	45%
ABSENT	55	55%
TYPE OF ILLNESS (N=45)	NO OF PATIENTS	PERCENTAGE
MAJOR DEPRESSIVE DISORDER	23	51%
MILD DEPRESSIVE DISORDER	11	24%
DEMENTIA/DELIRIUM	8	17%
GENERALISED ANXIETY DISORDER	3	8%

Among 45 patients diagnosed with psychiatric morbidity most of the patients had major depressive episode (n=23) followed by mild depressive episode in 11 patients. Eight

patients had neuropsychiatric problems such as dementia, delirium and three patients had generalised anxiety disorder (Table 1).

Table 2: Correlation with sex and age.

SEX	PSYCHIATRIC MORBIDITY		TOTAL
	PRESENT	ABSENT	
MALE	31	37	68
FEMALE	14	18	32
TOTAL	45	55	100
AGE	PSYCHIATRIC MORBIDITY		TOTAL
	PRESENT	ABSENT	
< 40 YEARS	11	12	23
40-60 YEARS	27	35	62
>60 YRS	7	8	15
TOTAL	45	55	100

Next we took up duration of renal disease and compared with duration of psychiatric illness. It was observed that statistically significant relation between them (p=0.032). Most of the patients diagnosed to have a psychiatric illness in our study belonged to the age group of 40-60 years (Table 2). Similarly majority of the patients who did not suffer from psychiatric illness also belonged to

the same age group. No significant association was found when age group was compared to the psychiatric illness. The mean age of onset of ESRD in our sample was around 48 years and the mean age of onset of psychiatric morbidity was 52 years. Most of the patients belonged to the category of mental illness had disease more than five years (Table 3).

Table 3: Correlation with duration of illness.

RENAL DYSFUNCTION	SEX		TOTAL
	MALE	FEMALE	
< 5 YEARS	58	25	83
> 5 YEARS	10	7	17
TOTAL	68	32	100
RENAL DYSFUNCTION	DURATION OF PSYCHIATRIC ILLNESS		TOTAL
	> 5 YEARS	< 5 YEARS	
> 5 YEARS	31	37	68
< 5 YEARS	14	18	32
TOTAL	45	55	100

DISCUSSION

Chronic kidney disease is emerging to be an important chronic condition. Nowadays the prevalence of diabetes and hypertension is on rise.^[9] Earlier studies that have been done in various parts of India have been reviewed to examine the prevalence of CKD, which starts from 0.79% to 1.4%. The rate of ESRD was evaluated to be 181/million populations in 2005 in the central part of India.^[10] Many more such studies are needed across the nation in order to evaluate the exact burden of CKD.

In our study there was a male preponderance which is similar to previous studies done by various researchers and the mean age group was around 51 years. A study by Al Dukhayel *et al*^[14] done on prevalence of depression in haemodialysis patient noted mean age of the patient to be 46.55. Similarly another study by Muhammad *et al.* in haemodialysis patient also found the mean age of the patient to be 49 years, and majority of patients in study were males. Similarly, Chandrashekhar *et al* found male preponderance among haemodialysis patients. Psychiatric disorders are common among patients with CKD having many personality disorders. The prevalence of depression in CKD patients has varied widely in different studies and different populations, using different assessment tools. Prevalence rates are high as 30% have been reported in the studies^[11] which is similar to our study where we had 23% of patients having depressive disorders. Another study also suggested that depression as the psychiatric morbidity related with ESRD patients on dialysis.^[15]

Haemodialysis is a life-sustaining treatment for patients with ESRD. Patients on Haemodialysis are highly susceptible to emotional problems such as depression. Depression is an independent factor for non-adherence in patients on maintenance dialysis^[12] and suicide is highly linked with a depressed state of mind. It accounts for a death rate 0.2%/1000 dialysis patient-years at risk.^[13] Cukor *et al*^[12] showed that anxiety disorders were prevalent in the ESRD but no study for patients with ESRD for the presence of multiple psychiatric disorders whereas in our study there was only three patients with anxiety disorder. This study that has found depression to be a predictor of high mortality in cases undergoing haemodialysis. Dialysis physicians often give less attention to somatic complaints of psychiatric illnesses are undiagnosed, affecting the prognosis of the disease.

CKD patients on long-term haemodialysis are undergoing tremendous stress of environmental conditions in high order. These patients thought that they were on depending others in life. This condition may lead to negative way in this patient because of fear and disability. Psychiatric co-morbidity, sometimes hidden behind of vigorous symptoms definitely affects the treatment. It becomes necessary to carefully assess the patients undergoing haemodialysis and improve their management both physically and psychologically.

CONCLUSION

The present study has been helpful in understanding the prevalence of psychiatric illness among the CKD patients undergoing haemodialysis. Based on this study its high time psychological support to be given to the patients undergoing haemodialysis, which can be achieved with continuous assessment and evaluation of each patient's needs. Psychosocial interventions would be better to begin at diagnosis of CKD. Also, the role of treating physicians should also focus on psychological element by advocating about the treatment limitations, self-care, and also enable patients taking responsibility for their health needs.

REFERENCES

1. Bargman J, Skorecki K. Chronic kidney disease. In: Lango D, editor. Harrison's principle of internal medicine. 18th ed. McGraw-Hill, 2012; 2308–21.
2. Levy NB. Psychological reactions to machine dependency: hemodialysis. *Psychiatr Clin North Am*, 1981 Aug; 4(2): 351–63. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/7024938> PMID: 7024938.
3. Papadakis E. Approach of patients with kidney disease and patients with beta- thalassaemia in a general hospital in crete and investigation of their quality of life. Thesis, 2010.
4. De Sousa A. Psychiatric issues in renal failure and dialysis. *Indian J Nephrol*, 2008; 18(2): 47-50.
5. Addison T. A selection of the collected works of Thomas Addison. In: Wilks S, Daldy TM, editors. London: New Sydenham Society, 1868.
6. Cramond WA, Knight PR, Lawrence JR. The psychiatric contribution to a renal unit undertaking chronic haemodialysis and renal homotransplantation. *Br J Psychiatry*, 1967; 113(504): 1201-12.

7. Nichols KA, Springford V. The psycho-social stressors associated with survival by dialysis. *Behav Res Ther*, 1984; 22(5): 563-74.
8. Fujisawa M, Ichikawa Y, Yoshiya K, Isotani S, Higuchi A, Nagano S, *et al.* Assessment of health-related quality of life in renal transplant and hemodialysis patients using the SF-36 health survey. *Urology*, 2000; 56(2): 201-6.
9. Gupta R. Trends in hypertension epidemiology in India. *J Hum Hypertens*, 2004; 18(2): 73-8.
10. Rajapurkar M, Dabhi M. Burden of disease - Prevalence and incidence of renal disease in India. *Clin Nephrol*, 2010; 74(1): S9-12.
11. Watnick S, Kirwin P, Mahnensmith R, Concato J. The prevalence and treatment of depression among patients starting dialysis. *Am J Kidney Dis*, 2003; 41(1): 105-10.
12. Cukor D, Rosenthal DS, Jindal RM, Brown CD, Kimmel PL. Depression is an important contributor to low medication adherence in hemodialyzed patients and transplant recipients. *Kidney Int*, 2009; 75(11): 1223-9.
13. Kimmel PL, Peterson RA. Depression in end-stage renal disease patients treated with hemodialysis: Tools, correlates, outcomes, and needs. *Semin Dial*, 2005; 18(2): 91-7.
14. AlDukhayel A. Prevalence of depressive symptoms among hemodialysis and peritoneal dialysis patients. *Int J Health Sci (Qassim)*, 2015 Jan; 9(1): 9-16.
15. Diale NNN, Mamadou SO, Aida S, Habib TM, Boucar D. Factors related to depression in patients undergoing hemodialysis due to renal failure in Senegal. *Psychology*, 2015; 6(4): 409-14.