



ESRD ASSOCIATED PSYCHOSIS AND DEPRESSION: PREVALENCE AND CONSEQUENCES IN END STAGE RENAL DISEASE AT HEALTHCARE SECTOR

Maria Ayub*, Samra Wahid, Nimra Shahzad, Syeda Bismah Javaid & zehra Ashraf

Lecturer, Faculty of Pharmacy, Jinnah University for Women, Karachi 74600, Pakistan.

*Author for Correspondence: Maria Ayub

Lecturer, Faculty of Pharmacy, Jinnah University for Women, Karachi 74600, Pakistan.

Article Received on 15/10/2015

Article Revised on 03/11/2015

Article Accepted on 26/11/2015

ABSTRACT

Hemodialysis (HD) is a life sustaining treatment for patients with ESRD. One of the commonest symptom present in hemodialysis patient is depression. As there is no recognized fact about the prevalence of depression in hemodialysis patients in Pakistan thus a multi centre study (cross sectional survey) is planned to identify the frequency of depression on maintenance hemodialysis patients 18-75 years, with no psychiatric illness and on hemodialysis for more than 3 months. The data collected and statically analyzed and compared to may co morbidities parameters and concluded that HD patients suffered from depression but age doesn't show any effect on its prevalence. After careful consideration we can conclude that Hemodialysis patients of 68.1% were suffering from poor sleep, 10.8% from daytime sleepiness, 72.3% from depression and 44.7 % were the prey of fatigue while the rest of them 31.9% free from poor sleep, 89.2% were free from daytime sleepiness , 27.7% free from depression and 55.3% were free from fatigue and this consequences clearly reflects prevalence of depression in Hemodialysis patients.

KEYWORDS: Prevalence,depression,psychosis.

INTRODUCTION

Hemodialysis or the kidney dialysis is basically a process of removing the extra water and waste like salt, urea, creatinine, from the blood of the body and hence purify the blood. When kidney stops doing the normal function and a stage occur known as renal failure then hemodialysis has been performed.it is used to maintain the proper balance of electrolytes in blood.^[1] Hemodialysis help in existence of patient with ESRD in a physical world. It has revolutionized the treatment of end-stage renal disease (ESRD) and allowed patients with this disease throughout the world to survive long. Here has been a progressive increase in both the incidence and prevalence of patients with ESRD throughout the world.^[2] HD patients suffer from the emotional problems because of the chronic stress related to disease burden, dietary restrictions, functional limitations, associated chronic illnesses, adverse effects of medications, changes in self-perception and fear of death.^[3, 4]

Hemodialysis cause changes in patients and results in continuous stressful condition which the patients have to face three times a week.^[5] However the psychological response to HD depends on unhealthy mental status and a patient suffered from more than one disorder.^[6]

Depression play a vital role in increasing chronic

disorder illness.^[7] Patient suffering from ESRD have the common psychological problem is depression. It is a collection of symptoms including feelings of sadness, helplessness, hopelessness, guilt and is accompanied by changes in sleep, appetite and libido.^[2] Depression is characterized by somatic and cognitive features.^[8, 9] The somatic characteristics of depression include weird symptoms like uremia, sleep disturbance, fatigue and gastrointestinal disorders.^[10, 11]

The prevalence rate for depression in patients with ESRD is around 3 times that of the general population. Though the issue has been a focus of attention in developed countries for last three decades but in Pakistan there has been no documented evidence of prevalence of depression in hemodialysis patients. Thus a research is designed to identify the prevalence of depression in hemodialysis patients. The objective of this study is to identify the prevalence of depression among hemodialysis patients in Pakistan and to identify the predictors of depression in hemodialysis patients.

METHODOLOGY

The study was conducted in Karachi from April 2015 to September 2015 based on descriptive studies to find out the prevalence of depression in patients on maintenance HD for more than 3 months and correlate it with their characteristics in human population including age,

gender, residence, cause of ESRD, socioeconomic status, education, dialysis data (initiation of dialysis, vascular access, frequency of dialysis, and duration of dialysis), mode of traveling for dialysis, total time consumed in getting dialysis, and number of attendants were collected by the investigators of each patient to determine any variation in outcomes affected by these factors using a specifically designed questionnaire. Patients having hemodialysis and show abnormal behavior as compared to normal hemodialysis patients were the great concerned during studies. The patients were invited to participate in this study were from four dialysis center. The four dialysis centers selected were dialysis unit at Abbassi Shaheed Hospital (tertiary care setting), AKHU and Park Lane Hospital at clifton (liver transplant and dialysis center) and TABBA (a privately run center for dialysis of patients). All these four dialysis centers are providing hemodialysis services. These four sites were selected to have more physical and physiological suffering patient's

population by including a mix number of participants from all socio economic groups. All 125 patients were the part of study and received questionnaires in one of the routine visit for hemodialysis. One of our group members interviewed them. Furthermore the patients were inquired about the time of dialysis, durations of dialysis, their social relationship, environmental factors, their financial resources, physiological health and other co-morbidities (i.e diabetes and hypertension etc). These patients were compared to each other to identify the level of social supports of these dialysis patients.

RESULTS

Amongst 125 patients on hemodialysis, 88(70.4%) were men, 98(78.4%) were married, 83(66.4%) were literate, 105 (84%) were unemployed, 70(56%) were older than 45 years. The mean age values of the patients and controls are demonstrated in Table 1.

Table :- 1 Mean Age of Patients on Hemodialysis.

Participants	Numbers	Mean age Y
Hemodialysis patients	125	47.5 ± 9.89
Abbassi Shaheed Hospital	55	49.52 ± 10.56
AKHU	45	46.56 ± 8.74
Park Lane Hospital	10	44.67 ± 9.98
TABBA	15	43.22 ± 9.22
Diabetes Mellitus	45	45.46 ± 9.98
Others	79	48.80 ± 9.03
Duration of dialysis months > 8	48	45.68 ± 9.47
Duration of dialysis months ≤ 8	77	50.13 ± 9.956
Dialysis 1 per week	15	48.44 ± 6.65
Dialysis 2 per week	90	47.38 ± 6.12
Dialysis 3 per week	20	48.44 ± 6.65

Seventy five patients (60%) were residents of urban areas and 77 (61.6%) were on dialysis for more than 8 months. Monthly income was less than 5000/- rupees in most of the patients (60.8%). The patients reporting poor sleep quality, daytime sleepiness, depression and fatigue are termed as POOR HD patients and the patients reporting poor sleep quality, daytime sleepiness, depression and fatigue are termed as GOOD HD patients.

The statistical analysis showed that HD patients of 68.1% were suffering from poor sleep , 10.8% from daytime sleepiness , 72.3% from depression and 44.7 % were the prey of fatigue while the rest of them 31.9% free from poor sleep, 89.2% were free from daytime sleepiness , 27.7% free from depression and 55.3% were free from fatigue illness shown in Fig. 2.

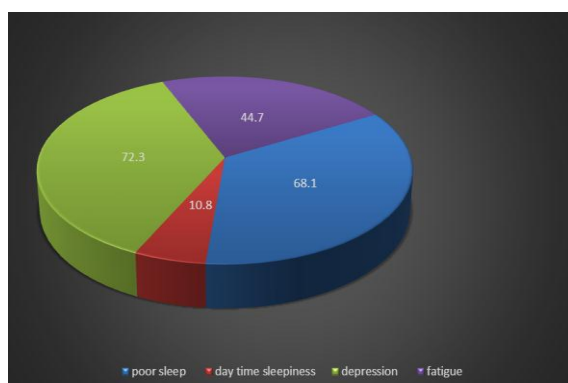


Figure 1: Percentage of the study poor HD patients reporting poor sleep quality, day time sleepiness, depression and fatigue.

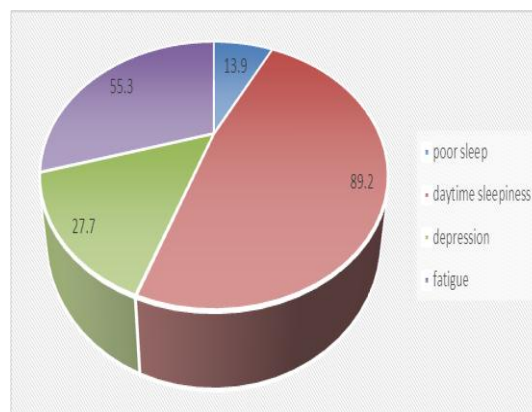


Figure:-2 Percentage of the study good HD patients reporting have no poor sleep quality, daytime sleepiness, depression and fatigue are termed.

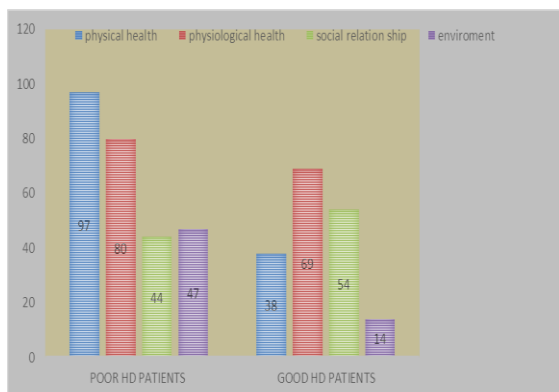


Figure:-3 Comparison Of Domain Scores Of Quality Of Life Analysis In 125 Patients On Hemodialysis

The QOL analyzed among 125 HD patients by some mean of Domains like physical health, physiological health, social relationship and environment. The POOR HD patients were 97% suffering from bad physical health and 80% suffered from physiological health, 44% suffered from social relationship and 47% were affected by environmental factors while the GOOD HD patients were 38% suffered from bad physical health and 69% from physiological health and 54% from social relationship and just of 14% were affected by environmental factors.

DISCUSSION

The patient's QOL has been seriously affected by End-stage disease, have no positive effect on their social financial and psychological well being. End stage renal failure affect greatly and intensely on QOL of patients then that of the diabetes, chronic lung disease and arthritis. Along with this, these patients do homeopathic, herbal and some sort of different methods to improve their kidney functions. However when they don't get satisfactions and they become depressed and hence decreased the QOL.

The age plays a significant role in the depression. As the age increases the cause of depression in HD patients increases. The QOL supports better to the patients who receives frequently bases of dialysis. It seems that the marital status and gender have no effect on the QOL and depression. In this study the frequency of depression is 72.3%. The depression can be measured by the risk factors of overlapping symptoms in HD patients.

Duration of dialysis has a vital role in affecting the QOL of patient in hemodialysis. Duration of dialysis is significantly inverse relation to that of QOL in these patients. As the duration of dialysis increases by patients the QOL is decreased and become decline. In this study mostly the patients do their dialysis once or twice in a week as compared to trice which is internationally been recommended.

The environmental domain showed less effect on QOL of HD patients then that of the domains like physical

health, psychological health and social relationships. Since the good HD patients can live in same socioeconomic conditions, availing same transport, residing in same home and physical environment, because the good HD patients have greater significance to that of QOL. The sleepiness and day time sleepiness found no correlation with demographic and clinical parameters.

In our country unfortunately don't practices cadaveric transplantation yet. So, for the most of our pts, HD is not temporary solution. Successful transplantation is associated with reduced levels of anxiety and depression.

The main reasons of our results are like this is due to the fact that older patients have higher PREVELANCE OF CO MORBIDITIES which shows that it cause the incensement of depression and decreased in QOL.

Our study, however, has some limitations. Because our hospitals or the dialysis centers are predominantly a transplant-oriented center, our MHD patients are predominantly young males and have short duration of dialysis and low co-morbidities. Therefore, the results might not be able to show of all the dialysis patients in our country.

CONCLUSION

To conclude, our study suggests that depression does not effected by increasing age factor but it may be high due to stressful conditions and other parameters. Considering the negative impacts of these factors cause the decreasing in QOL of HD patients.

Abbreviations

ESRD End stage renal disease

QOL Quality of life

HD Hemodialysis

MHD Maintainance hemodialysis patient

REFERENCE

- Graham T. The Bakerian lecture: on osmotic force. Philosophical Transactions of the Royal Society in London. 1854; 144: 177–228.
- Finkelstein FO, Finkelstein SH. Depression in chronic dialysis patients: assessment and treatment. Nephrol Dial Transplant. 2000; 15: 1911–3.
- Son YJ, Choi KS, Park YR, Bae JS, Lee JB. Depression, symptoms and the quality of life in patients on Hemodialysis for End Stage Renal Disease. Am J Nephrol. 2009; 29: 36–42.
- Kojima M, Hayano J, Suzuki S, Seno H, Kasuga H, Takahashi H, et al. Depression, alexithymia and long-term mortality in chronic hemodialysis patients. Psychother Psychosom. 2010; 79: 303–11.
- Bargiel-Matusiewicz K psychological influence on the psychical state of haemodialysis patient J.Physiol pharmacol 2006; 57(4): 33-38
- Kimmel P.I, Levy N.B. Psychology and rehabilitation In; Daugirdas J.T, Blake P.G., Ing

- T.s.editor Handbook of dialysis
Lippincott,Williams&Willkins 2000; 413-419.
7. Kimmel PL, Thamer M, Richard CM, Ray NF. Psychiatric illness in patients with end-stage renal disease. *Am J Med* 1998; 105(3): 214-21.
 8. Iosifescu DV, Nierenberg AA, Alpert JE, Smith M, Bitran S, Dording C, Fava M: The impact of medical comorbidity on acute treatment in major depressive disorder. *Am J Psychiatry* 2003; 160: 2122–2127.
 9. Smith MD, Hong BA, Robson AM: Diagnosis of depression in patients with end-stage renal disease. Comparative analysis. *Am J Med* 79: 160–166, 1985
 10. McDade-Montez EA, Christensen AJ, Cvengros JA, Lawton WJ. The role of depression in dialysis withdrawal: *Health Psychol* 2006; 25(2): 198-204.
 11. Drayer RA, Piraino B, Reynolds CF Houck PR, Mazumdar S, Bernardini J, et al. Characteristics of depression in hemodialysis patients: symptoms, quality of life and mortality risk. *Gen Hosp Psychiatry*. 2006; 28(4): 306-12.