Original Article

Incidence Of Anxiety And Depression Among Patients Undergoing Hemodialysis In A Tertiary Care Hospital

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INTRODUCTION

Chronic kidney disease is defined as kidney damage for more than 3 months, as defined by structural and functional abnormalities of the kidney with or without decreased GFR, manifested by either, Pathological abnormalities; or makers of kidney damage, including abnormalities in the composition of the blood or urine, abnormalities in imaging testing. GFR < 60ml/min/1.73 m2 for > 3 months, with or without kidney damage is also described as CKD

Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure.

Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest.

Diabetes and high blood pressure, or hypertension, are responsible for two-thirds of chronic kidney disease cases. There are a few other conditions or circumstances that can cause kidney disease. Glomerulonephritis, autoimmune diseases and other causes: Obstructions caused by kidney stones or tumors can cause kidney damage. An enlarged prostate gland in men or repeated urinary infections can also cause kidney damage. Risk factors are diabetes, high blood pressure, family history of kidney failure, old age and ethnic groups,such as African Americans, Hispanic Americans, Asian, Pacific Islanders, and American Indians.

Most people may not have any severe symptoms until their kidney disease is advanced. However, patient may feel more tired and have less energy, trouble in concentrating, a poor appetite and troubled sleep, muscle cramps at night, swollen feet and ankles, puffiness around eyes, especially in the morning, dry, itchy skin. Patient may need to urinate more often, especially at night.

Literature Review

The typical symptoms of depressive disorder consist of depressed mood, loss of interest or pleasure, changes in

appetite and weight, changes in sleep and activity, lack of energy, feelings of guilt, problems thinking and making decisions, and recurrent thoughts of death or suicide.1 Of these symptoms, depressed mood, feelings of guilt and suicidal ideation are known as the depressive triad2 and can be easily recognized in depression, whereas other symptoms are sometimes mistakenly considered as symptoms of medical illnesses other than depression. This makes depressive disorder difficult to diagnose by non-professional or non-psychiatry medical professional. [3]

In reality, depressive patients do not exhibit precisely typical depressive symptoms such as depressive mood, feelings of guilt, and suicidal ideation.3 Rather, demographic characteristics, such as sociocultural background, sex, age, education level, financial situation, and clinical variables (e.g., symptom severity) may influence the presentation of depressive emotion. [4-21]

Considering these characteristics of the psychopathology of the depression, the diagnostic criteria and instruments used for depression require adjustment to each patient's clinical situation or variables. However, the diagnostic criteria and scales currently used appear to neglect these aspects as they only list the symptoms or items of the scale and consider them without adjustment or weighting according to significance in the whole context of a depressive disorder or according to specific situations.

General symptoms of depression that are not influenced by clinical or cultural variables, those symptoms can be used as universal criteria. Symptoms of depression that are sensitive to specific clinical variables and well-defined specific situations can be used as specifying criteria. For example, Kiev divided depressive symptoms into primary symptoms, which are not influenced by cultural situations and include terminal insomnia, depressed mood, diurnal variation of mood, and loss of interests, and secondary symptoms, which are easily influenced by cultural situations and comprise retardation, feelings of guilt, and suicidal ideation. [22]

Demographic Characteristics: Several clinical and demographic variables, such as culture or race, sex, and severity of depression, are frequently considered. In addition, they provide information that can be useful for evaluating the symptoms that are more influenced by such clinical or demographic variables.

This study analyzed the frequency of symptoms on the 17-item Hamilton Depression Rating Scale (HDRS-17),[2] Korean version (K-HDRS),23 using multicenter Korean cohorts collected nationwide, and compared the findings with a previous study from England3 and two studies from Korea,24,25 to understand the characteristic frequency variations in the frequency of each item according to cultural parameters, sex, severity of depression, and chronological aspects, and to identify the possible symptom clusters. We hypothesized that although the frequency of symptoms varies, there may be characteristic patterns in this variation. Furthermore, the 17 items of the HDRS can be divided into three groups according to patterns in the symptom frequency. The first group includes core (general) symptoms with a constant and higher frequency; the second comprises associated symptoms with a constant but lower frequency; the third includes situation-specific symptoms with a variable frequency that is associated with a well-defined specific clinical situation. (BJ Sadock, 2007)

Demographic data were collected and neurological and laboratory tests were performed at baseline. Patients that had organic or physical problems were excluded from the study. The HDRS-17, the Clinical Global Impression Scale-Severity [27] and the Social and Occupational Functioning Assessment Scale (SOFAS) 28 were administered to evaluate the state of depression. The 17-item version of the HDRS, which was used in this study, was recently translated into a K-HDRS, [23] the reliability and validity of which have been confirmed. The DSM-IV-based structured clinical interview and the rater administered assessment were conducted by the same rater. The raters of each individual hospital were trained twice a year via formal consensus meeting for the use of rater- administered assessment instruments. The consensus meeting consisted of observing an experienced supervisory psychiatrist administer the evaluations and an actual administration via videotapes featuring standard MDD patients with or without psychotic features.

Correlation between the HDRS-17 total score and total count of present items and the presence/absence (yes/no) of each item

Comparison of symptom frequency (at least mild degree) between this study and the previous studies. Comparison of symptom frequency according to symptom severity. To evaluate the relationship between the severity of depressive symptoms and the frequency of depressive symptoms, the sample was divided into two groups: the below moderate

depression group (7< HDRS-17 score <20) and the above moderate depression group (HDRS-17 score ≥20). There were

Comparison of symptom frequency (at least mild) between the above moderate severity depression group (HDRS-17≥20) and the mild depression groups (7<HDRS- 17<20), insomnia late seems to be a severity-specific symptoms cluster.

The depressed mood, work and activities and psychic anxiety form a core symptoms cluster. This can be contrasted with two fundamental (or core) symptoms of the DSM-IV-TR diagnostic criteria for depressive episode. Depressed mood is commonly defined as a core symptom both in DSM-IV-TR and in this study. Here, the work and activities symptoms were regarded as corresponding to markedly diminished interest or pleasure in DSM-IV-TR. The only difference between this study and DSM-I-TR was psychic anxiety. The item of agitation in DSM-IV-TR diagnostic criteria for depressive episode can be seen as equivalent to psychic anxiety in this study. However, this symptom is handled only as an associated symptom and is just a part of compound psychomotor disturbance criterion of DSM-IV-TR diagnostic criteria for depressive episode. Depression has variable characteristic features; the anxiety component may be among these. In this respect, DSM-IV-TR categorical diagnostic criteria have been criticized for their apparent limitation in terms of reflecting the true clinical symptomatic nature of depression such as psychic anxiety component revealed in this study. [29]

Symptomatic Review: The six most frequent symptoms in this study, work and activities, depressed mood, psychic anxiety, somatic general, somatic anxiety, and agitation are included in the core defining symptoms of major depressive disorder as well as and anxiety disorders in DSM-IV-TR. This seems to reflect the high prevalence of comorbidity between depressive disorders and anxiety disorders. The National Comorbidity Study in USA revealed that the lifetime prevalence of two or more psychiatric disorders was 21%, and that 61.8% of cases major depressive disorder had a previous history of other psychiatric diagnosis whereas 58% had a history of anxiety disorder. [30]

Hamilton Score of Anxiety and Depression: The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Llevels of inter-rater reliability for the scale appear to be acceptable. Scoring; Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, , where , where, <17 indicates mild severity,18-24 mild to moderate severity.[Maier W, Buller R, Philipp M, Heuser I.

Methodology

Cross Sectional Study conducted over a period of six months. The study was conducted at the Nephrology Department of Abbas Institute of Medical Sciences (AIMS). A total of 100 patients aged between 18-70 years undergoing HD on regular basis were studied. Data collection was done using a survey form, questions were asked from each patient in an ethical manner. One Hundred dialysis patients, aged between 18-80 years old undergoing maintenance hemodialysis, were randomly divided into three groups of morning, evening and night shifts and the data was collected by asking them questions randomly about their behavior from all 3 shifts

Data Analysis &Results Presentation

Statistics (Frequencies)

		Hamilton Anxiety Scale	Hamilton DepressionScale
N	Valid	100	100
	Missing	0	0
Mean		1.9500	1.5200
	Std. Error of Mean	.08572	.07175

Median	2.0000	1.0000
Mode	1.00	1.00
Std. Deviation	.85723	.71746
Skewness	.097	1.017
Std. Error of Skewness	.241	.241

Hamilton Anxiety Scale

		Frequency	Percent	Valid Percent	CumulativePercent
Valid	0_7 (Normal)	39	39.0	39.0	39.0
	8-10 Borderline(Abnormal)	27	27s.0	27.0	66.0
	11--21 Abnormal case	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

Hamilton Depression Scale

		Frequency	Percent	Valid Percent	CumulativePercent
Valid	0-7(Normal)	61	61.0	61.0	61.0
	8-10 Borderline	26	26.0	26.0	87.0
	11-21 Abnormal case	13	13.0	13.0	100.0
	Total	100	100.0	100.0	

One tailed (T) test One-Sample Statistics

Scales	N	Mean	Std. Deviation	Std. ErrorMean
Hamilton Anxiety Sscale	100	1.9500	.85723	.08572
Hamilton DepressionScale	100	1.5200	.71746	.07175

		Age groups	Gender groups
N	Valid	100	100
	Missing	0	0
Mean		2.7500	1.3600
Std. Error of Mean		.11492	.04824
Median		3.0000	1.0000
Mode		4.00	1.00
Std. Deviation		1.14922	.48242
Range		3.00	1.00
Sum		275.00	136.00

Age groups

		Frequency	Percent	Valid Percent	CumulativePercent
Valid	18 to30 years	17	17.0	17.0	17.0
	30 to45 years	30	30.0	30.0	47.0

45 to 55 years	14	14.0	14.0	61.0
55 to 71 years	39	39.0	39.0	100.0
Total	100	100.0	100.0	

One Way ANOVA Age groups

	Sum ofSquares	Df	Mean Square	F	Sig.
Between Groups	6.250	1	6.250	4.920	.029
Within Groups	124.500	98	1.270		
Total	130.750	99			

Duration of Dialysis

	<1 to 2 years	3 to 6 years	7 to 12 years	TOTAL
ANXIETY	39/61 (64%)	18/61 (30%)	04/61 (06%)	61/100
DEPRESSION	26/39 (66%)	10/39 (266%)	03/39 (08%)	39/100

Socioeconomic Statistics

	POOR	MIDDLE CLASS	RICH	Total
ANXIETY	19/61 (31%)	32/61 (52%)	10/61 (16%)	61/100
DEPRESSION	14/39 (36%)	17/39 (44%)	08/39 (21%)	39/100

Gender groups

Gender groups		N	Mean	Std. Deviation	Std. Error Mean
Hamilton Anxiety Scale	Male	64	1.8906	.81877	.10235
	Female	36	2.0556	.92410	.15402

Discussion: We have interviewed and reviewed 100 patients of CKD for the analysis to rule out depression and anxiety by renowned scale named as “Hamilton Anxiety & Depression scale” We made scoring by using this special scale. On which 7 or less than 7 score patients considered free of anxiety and depression and patients having Hamilton score >8 are considered to have anxiety or depression. In our study 64 were males (64%) and 36 were females (36%). In our study 61% patients are caught by anxiety while 39% patients are scene to be caught by depression having Hamilton score >8. On the basis of socioeconomic status 61 patients caught by anxiety and 39 patients were divided into three classes as poor, middle class and rich…out of 61 patients having anxiety 19 patients belong to poor,32 patients belong to middle class and 10 patients belong to rich background.

While out of 39 patients caught by depression 14 belong to poor, 17 belong to middleclass and 8 belong to rich background. So depression and anxiety rates are found to be higher in patients belonging to middleclass and poor families as compared to rich patients. Depression and anxiety rates are found higher in patients who are on MHD from 1-2 years as compared to patients on dialysis from3 to 12 years.

We have concluded many reasons behind anxiety and depression from which fear to death is the utmost cause of developing this lethal condition. Other reasons are financial problems, Family history, psychological issues, time of diagnosis, lack of awareness, family troubles, painful &time consuming Dialysis procedure, lack of counselling by health care providers and poor Prognosis of CKD

Conclusion: Hamilton Anxiety Scale is much higher than Hamilton depression Scale in CKD Patients reported in Nephrology department of Abbas Institute of Medical Sciences Muzaffarabad.

Recommendations/Suggestions: After deep and thorough study following are the recommendations proposed by us Health department and AIMS administration:-

- Try to minimize the financial burden of the patient
- Involve the NGO's so that they may help the patient in medication or household things
- Patients should be given job which involves less physical activities like sewing clothes or teaching
- There should be friendly environment for patients in hospital.
- Engage the patient in healthy activities.
- Psychotherapy and Counselling of the patient.
- Health department should arrange awareness sessions for public.
- Health department should arrange seminars and workshops for health care providers

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