ABSTRACT

OBJECTIVE: To assess the prevalence of anxiety and depression in chronic kidney disease (CKD) patients according to CKD stages.

STUDY DESIGN: A descriptive study.

PLACE AND DURATION: Department of Nephrology, Rawal Institute of Health Sciences, Islamabad from 1st May 2016 to 30th Sep 2016.

METHODOLOGY: 103 patients diagnosed of chronic kidney disease were evaluated for anxiety and depression using Beck Anxiety Inventory (BAI) score and Beck Depression Inventory (BDI) score.

RESULTS: Out of 103 patients 74% had stage V disease, 16% had stage IV disease, 5.8% had stage III disease and 2.9% had stage II disease. No patient had stage I disease. 38% patients had moderate to severe anxiety and 38% had mild anxiety in stage V. 40% patients had moderate to severe depression and 19% had mild depression in stage V.

CONCLUSION: This study shows that anxiety and depression is quite prevalent in chronic kidney disease patients especially in stage IV and V.

KEY WORDS: Chronic kidney disease, Depression, Anxiety, Chronic renal failure, End stage renal disease, Psychiatric illness


INTRODUCTION

Chronic kidney disease (CKD) or chronic renal failure (CRF) is a worldwide public health problem. In the United States the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) reports that 1 in 10 American adults has some level of CKD. Kidney disease is ninth leading cause of death in United States. The worldwide prevalence of end-stage renal disease (ESRD) is expected to continue to rise at an annual rate of 7%. Annual incidence of new cases of CKD is more than 100 per million population of Pakistan.

It is defined as kidney damage or decreased glomerular filtration rate (GFR) of less than 60 ml/min that has been present for more than three months. CKD is a clinical state that is independent of the causes(s). CKD is more common in elderly people but also not uncommon in young population. Almost 30% of patients more than 65 years have stable CKD.

CKD is a lifelong disease and social problem for the patient. It is a continuous health problem in which prolonged medication is needed and requires the patient to bear a lot of expenses. There is also a phobia of dialysis during which the patient is dependent on others and has restricted mobility. Patient is also worried about renal transplant which is very difficult and costly. There are a lot of fears related to the outcome of the disease in long term. A large number of Asian individuals view depression as a taboo and do not openly seek regular psychotherapy. There is poor social acceptability for the patient by close contacts due to uremic smell. All these factors lead to development of psychiatric illnesses like anxiety and depression.

The aim of this study was to assess the prevalence of anxiety and depression in chronic kidney disease (CKD) patients according to CKD stages.

METHODOLOGY

This descriptive study was carried out in the Nephrology Department of Rawal Institute of Health Sciences, Islamabad from 1st May 2016 to 30th Sep 2016.

One hundred three patients of chronic kidney disease were included in the study. Kidney disease outcomes quality initiative (KDOQI) guidelines for CKD patients by National Kidney Foundation (NKF) were used for staging of CKD. BAI score was used for anxiety and BDI score for depression. Patients were selected both from inpatient and outpatient department. Patients having malignancy of kidneys or other parts of body were excluded from the study. Patients having psychiatric illness in past were also excluded.
Patients were given two proformas, one having BAI questions and other having BDI questions. Both proformas had 21 questions each (proforma annexed). Both proformas were in Urdu language. When the proformas were filled, then interpretation of scoring was done. SPSS version 20 was used for statistical analysis of data. Following guidelines were used for anxiety and depression score:

**BAI and BDI scoring**

**Anxiety score**
- 0-7 minimal anxiety
- 8-15 mild anxiety
- 16-25 moderate anxiety
- 26-63 severe anxiety

**Depression score**
- 0-9 minimal depression
- 10-18 mild depression
- 19-29 moderate depression
- 30-63 severe depression

The following CKD staging system was used:

- **Stage I**: kidney damage + GFR ≥ 90 ml/min
- **Stage II**: kidney damage + GFR 60-89 ml/min
- **Stage III**: kidney damage + GFR 30-59 ml/min
- **Stage IV**: kidney damage + GFR 15-29 ml/min
- **Stage V**: kidney damage + GFR <15 ml/min

### RESULTS

Out of 103 patients 77 had stage V disease. 16 patients had stage IV disease. 6 patients had stage III disease. 1 patient had stage II disease. No patient had stage I disease (Table - III).

### DISCUSSION

People with CKD have a poorer quality of life as compared to general population. The care takers of the patient are usually not aware of the emotional and psychological distress. CKD is a health issue that persists for the rest of patient’s life. It requires lifelong medical care and hence financial impact, family support and social adjustments according to various stages of the disease. Mostly the patients present in nephrology department at stage IV or V suffer due to multiple factors like unawareness, misconception about treatment modalities. Hence the patient seeks help from Homoeopaths, Hakims, faith healers and self-medications. When disappointed, they seek advice from general practitioners or physicians for shortness of breath, anemia and dyspeptic symptoms. Due to this, valuable time during early stages where the progression of the disease can be delayed through early diagnosis and intervention is lost. Lifelong dialysis is the only other option but it is too costly and
cumbersome. Lack of dialysis facilities and trained staff in distant areas leads to mobility restrictions for the patient, repeated trauma and social dependence, which all lead to psychological trauma and there is so much negative perception of the procedure so much that many patients have dialysis phobia.

Chronic kidney disease (CKD) or chronic renal failure (CRF) is a worldwide public health problem. These patients have lot of problems like persistent uremic smell which is troublesome for the patients and the people around them. There are many factors in dialyzed patients that lead to depression, most important of them is a feeling of loss and dependence as described by Israel. Dependence on the dialysis machine, the dialysis staff and physician is also contributory in development of depression. A study was conducted by Hedayati et al. in which CKD patients were screened for depression. 21% of his patients had major depression. While in our study this ratio was even higher that is around 54%.

Kalender did a study in 2006 in which he found that 24% of his patients of CKD had depression. In contrast depression was present in more than 50% of patients in our study which is significantly high.

Another important observation was made by Tsai et al in which he found that high depressive symptoms increased the risk of progression to end stage renal disease or death and they had more rapid GFR decrease.

CKD patients usually respond to the pharmacotherapy for depression and anxiety with few side effects. Several drugs like tricyclic antidepressants (TCAs) and selective serotonin re-uptake inhibitors (SSRIs) have been used successfully in different studies. However SSRIs have few side effects like nausea, headache, insomnia and nervousness. In 1990s the drugs of choice were TCAs. Some of them are still in use like nortryptiline. It is recommended that these antidepressants should be initiated only on the advice of a psychiatrist taking in consideration the possibility drug interactions. The efficacy and safety of antidepressants in CKD patients is not well established yet and is still a challenge for nephrologists.

CONCLUSION

This study shows that anxiety and depression is quite prevalent in chronic kidney disease patients especially in stage IV and V.

RECOMMENDATIONS

It is recommended that patients with advanced CKD should always be referred to psychiatrist for diagnosis and management. This will help to minimize the agony of the patients and their families.

BAI and BDI are effective screening tools in diagnosing anxiety and depression.

LIMITATIONS

It was single-center study and sample was not representative of whole Pakistani demographics. The safety of antidepressants in CKD patients still needs to be studies further for better control of depressive illness.

CONTRIBUTION OF AUTHORS:

Baloch MH: Conceived the idea, Data collection, Psychiatric analysis, Final Proof Reading.

Alamgir A: Designed methodology, Interpretation data, writing manuscript, Final Proof Reading

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REFERENCES