
PREVALENCE OF ANXIETY AND DEPRESSION SYMPTOMS IN PATIENTS UNDERGOING HEMODIALYSIS : A SINGLE- CENTER STUDY

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ABSTRACT

Background: Hemodialysis is a stressful process and followed by various psychological and social problems that cause mental disorders. It is estimated that more than 70% of hemodialysis patients have anxiety or depression symptom.

Objective: To reveal the prevalence of anxiety and depression symptoms in hemodialysis patients.

Method: This study is a descriptive study with cross sectional approach, non-probability sampling technique type consecutive sampling. Place of research: Installation of Hemodialysis Dr.H. Adam Malik General Hospital Medan, March -April 2013. All patients that meet the inclusion criteria will be included in the study. Assessment of anxiety and depression symptoms was performed using the Hospital Anxiety and Depression Scale (HADS) questionnaire.

Result: A total of 81 patients were included the study have the characteristics of largest age at 45-54 years, male gender, married and duration of hemodialysis was 1-12 month. Based on HADS-A score of anxiety symptoms were 34 (42%), borderline 25 (30.9%), based on HADS-D score of depression symptom were 31 (38.3%), borderline 43 (53.1%).

Conclusion: This study found most patients undergoing hemodialysis with duration of hemodialysis 1- 12 months experience anxiety and depression symptoms.

Keywords: Chronic kidney disease, hemodialysis, anxiety and depression symptom, Hospital anxiety and depression scale (HADS).

1. INTRODUCTION

Kidney disease can be found all over the world. In Indonesia, about 200 patients of million population have chronic kidney disease. Most require renal replacement therapy to survive. Hemodialysis is the most commonly used as renal replacement therapy in Indonesia. (Ibrahim K, *et al*, 2009)

The incidence of psychiatric symptoms such as anxiety, depression and cognitive decline are very common among patients with chronic kidney disease. Several studies have shown the impact of this symptom on the quality of life of patients who have hemodialysis. (Bayat, *et al*, 2011). Hemodialysis is a stressful process and followed by various psychological and social problems that can actually cause mental health disorders. (Santos JB, *et al*, 2010)

Anxiety is a major cause of disability, however, data on the level of anxiety in patients undergoing hemodialysis therapy is rare. Research conducted by Sagduyu and colleagues in 2006, found 41.2% of patients undergoing hemodialysis therapy had a symptom of depression and 11.8% anxiety. (Cukor D, *et al*, 2008)

Johnson and Dwyer in 2008 report that more than 70% of hemodialysis patients have anxiety or depression symptoms, and are not treated because they do not recognize the symptoms they are experiencing or do not feel that they need treatment for their mental health condition. Doctors and nurses who handle non-psychiatric dialysis often do not recognize these symptoms so they remain undiagnosed. (Feroze U, *et al*, 2010)

Depression in hemodialysis patients was associated with increased frequency of hospital visits and more frequent to emergency department. Research conducted by Cukor *et al* in 2008, from 70 subjects that had hemodialysis therapy, 45.7% found experience anxiety disorders. (Cukor D, *et al*, 2008)

Anxiety makes people feel uncomfortable, afraid, nervous and worried, the effects on the physical can be a rapid, lethargic, angry and excessive sweating, this often occurs in patients undergoing hemodialysis therapy. Patient with hemodialysis are often feel anxious about death, as well as about the hemodialysis process itself, fear of needles, fear of seeing their blood outside the body, feelings of pain, anxiety among other patients who may be more severe, wondering whether the treatment will work as expected. (Offer D, *et al*, 2007)

Symptom depression includes feelings of sadness, loss of appetite, insomnia, difficulty concentrating, loss of interest, tendency to stay away from others, unwilling to engage in fun activities. Patients often become discouraged and upset about having to undergo hemodialysis. Like anxiety, the feeling of depression may take a while, but if it persists for more than a few weeks, then it should be anticipated. (Offer D, *et al*, 2007)

In a study of Patel *et al* in 2012, from 150 patients, 46.6% had a symptom of depression and 33.3% had anxiety symptoms. Dialysis as a stressful procedure to the patient, as well as strict restrictions on food and drink. There are no other medical conditions that have a level of dependence for maintenance therapy from other chronic diseases. (Patel ML, *et al*, 2012)

Dependence on the machine because patients have to undergo hemodialysis several times a week might be a negative effect of the hemodialysis machine based on patients' perspectives. The machine makes patients on hemodialysis reliant on it. Patients feel that they cannot go anywhere for a long time because they have to go to the hospital or hemodialysis for treatments. (Bayhakki, Hatthakit U, 2012)

Data from Hemodialisa Installation Dr. H Adam Malik general hospital Medan, each month more than 150 patients undergoing hemodialysis (HD).

1.2 Objectives

a. General objective

To determine the proportion of anxiety and depression symptom in patients undergoing hemodialysis in hemodialysis installation Dr. H Adam Malik General Hospital Medan using Hospital Anxiety and depression Scale (HADS) questionnaire.

b. Special objective

1. To determine the demographic characteristics of the study (age, gender, ethnic, work, marital status, duration of hemodialysis)
2. To determine the proportion of anxiety and depression symptom in patients undergoing hemodialysis based HADS score.

Benefit of research

- a. The results of this study are expected to provide information on the proportion of anxiety and depression symptom in patients undergoing hemodialysis based HADS score, so that patients can get better treatment not only for the disease but also for their anxiety and depression symptom.
- b. The results of this study can also be continued for further research or similar or other studies that use this study as a reference material.

2. METHODS

This study is a descriptive study in which each patient that came to the hemodialysis installation in Dr. H Adam Malik General Hospital Medan given a Hospital Anxiety and Depression Scale questionnaire to be filled. This study was done by March 2013-April 2013. The selection of the sample by means of non-probability sampling types consecutive sampling. Sample size was measured by using the formula and the sample size was 81 subjects. The inclusion criteria include: Patients undergoing hemodialysis in Dr. H Adam Malik General Hospital Medan, can speak Indonesian, willing to participate in research and sign the informed consent letter. Exclusion criteria included: Have a history of psychiatric disorders Not currently using antidepressants and / or anxiolytics.

2.1 Procedures

Patients undergoing hemodialysis that came to the hemodialysis installation, that met the inclusion criteria will be included in the study gave written consent after being given a detailed explanation and understood by the patient. Each patient enrolled in the study will be given a Hospital Anxiety and Depression Scale questionnaire, all data collected will be analyzed further.

Table 1 Characteristic of Subjects Study Based On Demographic Characteristics

Variable	number	Frequence	Percentage (%)
age	81		
15-24 years		3	3,7
25-34 years		7	8,6
35-44 years		26	32,1
45-54 years		27	33,3
55-64 years		18	22,2
Ethnic	81		
Batak		52	64,2
Non-Batak		29	35,8
Gender	81		
Male		56	69,1
Female		25	30,9
Work	81		
Have a job		38	46,9
No job		43	53,1
Marital status	81		
Married		70	86,4
Divorced/widowed		11	13,6
Duration of hemodialysis			
1-12 months	7	16	28
13-24 months	3	3	3
25-36 months	3	4	2
37-48 months	5	2	0
49-60 months	4	1	0

From table 1 basic data subject is seen the characteristics of age are most 45-54 years 27 subjects (33,3%), 56 subjects male gender (69.1%), no job 43 subjects (53,1%), married 70 subjects (86,4%), Batak 52 subjects (64.2%), duration of hemodialysis 1-12 months 45 subjects (55.6%).

Table 2 Subject Distribution Based On HADS-A Score

Variable	HADS-A		
	0-7 normal	8-10 borderline	≥11 anxiety
age			
15-24 years	0	0	3
25-34 years	1	4	2
35-44 years	8	7	11
45-54 years	10	10	7
55-64 years	3	5	10

Gender			
Male	15	18	23
Female	7	8	10
Duration of hemodialysis			
1-12 months	7	16	28
13-24 months	3	3	3
25-36 months	3	4	2
37-48 months	5	2	0
49-60 months	4	1	0

Table 2 found the distribution of research subjects based on the HADS-A score. In terms of age, the most anxiety symptoms in the 35-44 years 11 subjects. male gender was 23 subjects, duration of hemodialysis therapy 1-12 months 28 subjects (82.4%).

Table 3 Subject Distribution Based On HADS-D Score

Variable	HADS-D		
	0-7 normal	8-10 borderline	≥11 anxiety
age			
15-24 years	0	0	3
25-34 years	1	4	2
35-44 years	1	18	7
45-54 years	3	10	14
55-64 years	2	12	4
Gender			
Male	5	28	23
Female	2	16	7
Duration of hemodialysis			
1-16 months	6	33	12
17-33 months	0	3	6
24-49 months	1	2	6
50-65 months	0	3	4
66-81 months	0	3	2

Table 3 found the distribution of research subjects based on the HADS-D score. In terms of age, most of the depression symptoms in the 45-54 years 14 subjects, male gender 23 subjects, duration of hemodialysis therapy 1-12 months 12 subjects.

4. DISCUSSION

This study is a descriptive research with cross sectional approach. The result of the research shows that from 81 subjects, on the characteristic of the age are most was the age category 45-54 years with 27 subjects (33,3%), male gender 56 subjects (69.1%), no job 43 subjects (53,1%), Batak 52 subjects (64.2%), duration of hemodialysis 1-12 months 45 subjects (55.6%).

In this study most marital status subjects was married 70 subjects (86,4%). Physical and mental emotional problems that emerge due to hemodialysis therapy influence views, perceptions,

and responses of significant others to patients on hemodialysis. Significant others, such as spouses, children, neighbors, colleagues, and friends, may have positive or negative responses to the patients. If a significant other expresses a negative view, perception, or response, it may cause negative effects in their relationship with the patients, and disruptions in some relationships occur. Patients' mental and emotional statuses could become worse. However, patients on hemodialysis need family and social support to reduce negative effects of mental and emotional distress. It is also possible because with the condition of marital status, has a greater responsibility, both against the spouse and children. (Bayhakky, Hatthakit U, 2012)

Based on the HADS-A score, found the symptom anxiety in patients undergoing hemodialysis was highest in the age category 35-44 year with 12 subjects (35,3%), although the number of study subjects was more in the age range 45-54

years. This is probably due to the age of 35-44 years is the most productive age in which hemodialysis therapy had negative effect to the productivity of the patients. Reduced functional capacity” causes physical limitations or “inability to participate in activities and perform roles and responsibilities.” (Krueger, 2009). Based on the HADS-D score, found the depression symptoms was highest in the age category 45-54 years with 14 subjects, it is consider as older patients reported falling behind in social activities and interests, and being more socially restricted and depressed. (Theofilou P, 2011)

In this study, most subjects with duration of hemodialysis 1-12 months had anxiety and depression symptoms. Uncertainty about the future and fear of losing control of one’s life are important factors associated with anxiety that adversely

impact emotional stability. Tiredness, dry skin, difficulty falling asleep, decreased interest in sex, difficulty staying asleep, difficulty becoming sexually aroused, bone/joint pain, numbness/tingling, itching, and worrying were among the symptoms rated as most frequently occurring. (Danquah, et al, 2010)

5. CONCLUSION

From this study it was found mostly patients undergoing hemodialysis was highest in the age category 45-54 years, male gender, no job, married and duration of hemodialysis 1-12 months. Based on the HADS score, the level of anxiety and depression of the patients receiving hemodialysis was higher in subjects with duration of hemodialysis 1-12 monts.

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