

SOCIODEMOGRAPHIC FACTORS AND DEPRESSION IN PATIENTS WITH CHRONIC RENAL FAILURE TREATED BY CONTINUOUS AMBULATORY PERITONEAL DIALYSIS

SAPD TEDAVİSİ ALAN KRONİK BÖBREK YETMEZLİKLİ HASTALARDA SOSYODEMOGRAFİK FAKTÖRLER VE DEPRESYON

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SUMMARY

In the present study, depression and sociodemographic factors were investigated in patients with chronic renal failure treated by continuous ambulatory peritoneal dialysis (CAPD). This descriptive study included 24 patients (13 male, 11 female) treated by CAPD in Hemodialysis Center of Dicle University. Patients were evaluated according to Hamilton's Depression Scale (HAM-D) and sociodemographic factors. Mean dialysis period of CAPD patients was 20.1 ± 10.4 months, the average age was 40.6 ± 12.8 years, and mean HAM-D score was 9 ± 6. In general, the main complaints of patients were somatic anxiety (18 patients, 75.0%), general somatic symptoms, agitation, psychic anxiety, and hypochondria (14 patients, 58.3%), depressive mood (13 patients, 54.2%), feeling himself/herself guilty and early morning waking (12 patients, 50%). Six patients (25%) had different degree of suicidal ideas. One of them committed suicide. There is a strong positive correlation between HAM-D score and suicidal idea ($r=0.77$, $p<0.0001$). We found also a strong positive correlation between HAM-D score and psychic anxiety ($r=0.60$, $p=0.002$). In conclusion, our findings suggest that the higher HAM-D score of patients undergoing CAPD treatment are associated with suicidal ideas, psychic anxiety and lack of activity.

Key words: CAPD patients, depression, Hamilton's Depression Scale, suicidal ideas.

ÖZET

Çalışmada, Sürekli Ayaktan Periton Diyalizi (SAPD) alan Kronik Böbrek Yetmezliği (KBY) hastalarda sosyodemografik faktörler ve depresyon araştırıldı. Bu- tanımlayıcı çalışmaya, Dicle Üniversitesi Tıp Fakültesi, Hemodiyaliz Merkezinde tedavi edilen 24 SAPD hastası (13 erkek, 11 kadın) alındı. Hastalar, Hamilton Depresyon İndeksi (HAM-D) ve sosyodemografik faktörlerine göre değerlendirildi. Çalışma kapsamına alınan 24 SAPD hastasının ortalama SAPD süresi 20.110.4 ayken, yaş ortalaması 40.612.8 yıldır. HAM-D skor ortalaması ise 9 ± 6 idi. Hastalarda daha ziyade somatik anksiyete (18 hastada, %75), genel somatik semptomlar, ajitasyon, psikik anksiyete, hipokondriyazis (14 hastada, %58.3), depressif ruh hali (13 hastada, %54.2) kendini suçlu hissetme ve sabahları erken kalkma (12 hastada, %50.0) şikayetleri ön plandaydı. 6 (%25) olguda değişik derecelerde intihar düşüncesi bulunuyordu. Bir olgu da intihara teşebbüs etmişti. HAM-D skoru ile intihar düşüncesi arasında güçlü pozitif korelasyon saptandı ($r=0.77$, $p<0.0001$). İntihar düşüncesi ile iş ve aktivite kaybı ve ajitasyon arasında ise zayıf pozitif korelasyonlar mevcuttu (sırasıyla; $r=0.44$ ve $r=0.41$). Sonuç olarak; bizim bulgularımız, SAPD'li hastalarda yüksek HAM-D skorlarının intihar düşüncesi, psikik anksiyete ve fonksiyon kayıpları ile ilişkili olduğunu düşündürmektedir.

Anahtar Kelimeler: SAPD hastaları, depresyon, Hamilton Depresyon Skalası, intihar düşüncesi.

INTRODUCTION

Many psychiatric disorders can be seen in patients with chronic renal failure (CRF). According to the result of studies in patients, who undergo dialysis, especially hemodialysis (HD), the most common psychiatric disorder, which causes morbidity and mortality, is depression. To commit suicide frequently accompanies depression (1,2).

It has been reported in recent studies in our country that 22.9 per cent of these patients have at least one psychiatric disorder and the most common psychiatric disorder is depression (17.1%) in these patients (2). Various studies were published in different regions and countries about the prevalence of depression and the relation between sociodemographic factors and depression in patients treated by continuous ambulatory peritoneal dialysis (CAPD), which has gradually become common in Turkey, however, to held studies, which reflect our region, has become necessary (3,4).

The purpose of this study is to investigate sociodemographic factors and the prevalence and severity of depression in patients with CRF treated by CAPD and HD in Dicle University Hospital, during the period from August 1999 to October 1999.

MATERIAL AND METHOD

This descriptive study included 24 patients (13 M, 11 F) treated by CAPD in HD Centre of Dicle University in Diyarbakir city of Turkey. Diyarbakir is located in Southeast of Turkey, population is around 500.000. The University Hospital, in which study was conducted, has about 1.200 beds with all specialities. Our renal dialysis center started its function since 1998. The ethical committee of the university hospital approved the protocol of the study. All patients gave written informed consent to the study. Exclusion criteria were the presence of another chronic disease except CRF, evidence of malignancy, or the use of antidepressants, neuroleptics or anti-convulsive drugs at the beginning of the study.

The patients were evaluated according to Hamilton's Depression Scale (HAM-D) and sociodemographic factors. Sociodemographic informations were classified as following: Marital status; 1=married, 2=single, 3=separated/divorced. Occupation; 1=housewife, 2=retired, 3=self-employed, 4=officer, 5=worker, 6=unemployed, 7=student. Medical insurance 1=SSK (Social Insurance Foundation) 2=Green card (A special card is given by the Turkish Government to people without a medical

insurance) 3= Retirement Fund 4=BAG-KUR (a foundation which supports tradesmen in Turkey). Residence; 1=village, 2=town, 3=city). Function (activity level); 1=<50, 2=50-70, 3=80-100. Education; 0=illiterate, 1=primary school, 3=high school, 4=university. Income; 1=low, 2=middle, 3=high, 4=higher.

Continuous ambulatory peritoneal dialysis

Most CAPD patients were prescribed four 2-liter exchanges daily. A minority was treated with four 1.5-liter exchanges daily if they couldn't tolerate 2 liters in the peritoneum. All patients received peritoneal dialysis via a Tenckhoff coil catheter. CAPD patients used a Baxter's Ultra Bag system (Baxter Healthcare Corp., USA) or Fresenius' Freedom Y-set system (Fresenius Medical Care, Germany).

Hamilton's Depression Scale (HAM-D)

This index was developed to determine the level of depression and the severity of symptoms, and it should be scored by the interviewers. There are 3 different indices, which contain 17, 21 and 24 questions. The index, which contains 17 questions, was used in this study (5). The level of depression were classified as following: 0=No depression (=7), 1=Mild depression (8-12), 2=Moderate depression (13-17), 3=Severe (major) depression (18-29), 4=More severe (major) depression (=30). The patients who have more than 13 points in HAM-D had been treated by our psychiatry clinic.

Statistical Analysis

It has been done with SPSS 7.5 Computer Program. To compare categorical variations Chi-square test, compare two independent groups t-Test and do correlation analysis nonparametric Spearman Correlation Test were used. Results are expressed as mean±SD. A p value <0.05 was considered statistically significant.

RESULTS

Sociodemographic information; Gender: male/female= 13/11, mean period of CAPD=20.1±10.4 months. The average age was 40.6±12.8 years, and mean HAM-D score was 9±6 in 24 CAPD patients (**Table 1**). Reasons for CRF are shown in the **Table 1**, demographic information are shown in the **Table 3**, HAM-D test results are shown in the **Table 4**, depression levels according to HAM-D scores are shown in the **Figure 1**. Reasons for CRF were found as

following in 24 CAPD patients: Glomerulonephritis=7 (29.2%), chronic pyelonephritis=4 (16.7%), diabetes mellitus=3 (12.5%), hypertension=2 (8.3%), idiopathic=8 (33.3%), (**Table 2**).

A strong positive correlation has been found between HAM-D scores and suicidal ideas ($r=0.77$, $p<0.0001$, $r^2=0.60$, a linear correlation, **Figure 2**), also a strong positive correlation between HAM-D scores and psychic anxiety ($r=0.60$, $p=0.002$, $r^2=0.36$, a linear correlation, **Figure 3**). A moderate positive correlation between being single or separated/divorced and lack of activity has been found ($r=0.54$, $p=0.007$). Whereas, a weak positive correlation between suicidal ideas and lack of activity; also, a weak positive correlation between suicidal ideas and agitation have been found ($r=0.44$, $r=0.41$, respectively).

DISCUSSION

A higher prevalence of depression has been reported in CRF patients than normal population, in various studies, which use different depression indices (1,2). In comparison with Lye et al.'s study (3), our group was younger than their group. (The average age was 40.6 ± 12.8 years in our group, 54.2 ± 14.1 years in Lye et al.'s group). According to **Table 3**, other demographic informations: Marital status; 18 patients (75%) were married, 6 patients (25%) were single, no patient was separated/divorced. Education; 4 patients (16.7%) were illiterate, 13 patients (54.2%) graduated primary school, 7 patients (29.2%) graduated high school. Income; low (9 subjects, 37.5%), middle (11 subjects, 45.8%), high (11 subjects, 45.8%). Being housewife (11 subjects, 45.8%), living in the city (16 subjects, 66.7%) and having green card as medical insurance (9 subjects, 37.5%) were more common in other demographic parameters. Function (activity level); middle (11 subjects, 45.8%), well (11 subjects, 45.8%).

Major depressive disorders are common in these patients, however, to diagnose them is difficult and many organic symptoms mimic depressive symptoms. The prevalence of depression was reported as 56.3% in another study, which were carried out in CAPD patients with using HAM-D index and DSM-IV criteria. Higher HAM-D scores were found in 18 CAPD patients; it was proposed that; genetic, psychosocial and neurobiological factors affect onto depression level in these patients (4). On the other hand, DSM-IV criteria were inadequate to assess lower scored cases and patients with organic diseases. Therefore, a more specific diagnostic guide is required (6).

According to presence study, mean HAM-D score was 9 ± 6 and the depression prevalence was 45.8% in patients with CRF treated by CAPD. 2 patients (8.3%) had severe depression, 2 patients (8.3%) had moderate depression, 7 patients (29.2%) had mild depression; whereas, 13 patients (54.2%) were not diagnosed as having depression (**Figure 1**). In comparison with other studies the depression prevalence in our group (45.8%) higher than Lye et al.'s (3) study (13%), in which HAM-C was used, however, lower than Liu's (4) study (56.3%), in which HAM-D was used.

The following symptoms can be used to distinguish patients with depression from these without depression: depressed mood, loss of interest, slowing of thought, pessimistic thoughts (guilt, self-blame and suicide), lack of appetite and weight loss. Whereas, it has been proposed that fatigue, sleep disturbance and loss of libido are less important in diagnosis (7).

According to Sağduyu and Erten's study from Turkey (2); the following symptoms can be observed on more than 50% of patients diagnosed as having depression: delay in falling asleep (83.3%), fatigue (75%), loss of libido (75%), depressed mood (66.7%), early morning waking and waking during sleep (58.3%).

In our patients, somatic anxiety (18 patients, 75%), agitation, psychic anxiety, general somatic symptoms, hypochondriac symptoms (14 patients, 58.3%), depressive mood (13 patients, 54.2%), early morning waking and feeling guilty (12 patients, 50%) and loss of libido (11 patients, 45.8%) were evident (**Table 4**).

The most important psychological problems in patients who undergo dialysis are depression and suicide. The suicide risk is 15 times more than general population in these patients. 1/500 of them commit suicide (8). According to a multi-centre study, higher level psychic anxiety increases the suicide risk in depressive patients. Thus, anxiety and depressive disorder may result in greater morbidity and mortality (9). Depression also compromises functional well-being, such as work productivity. Comorbid anxious features often complicate the recognition of depression and herald a poor prognosis. It is considered that the presence of anxiety was related to the severity of depression, work absenteeism, and current social instability. Depression severity (HAM-D score >26 , including the contributions of anxious symptoms), psychiatric comorbidity, and psychomotor retardation best predicted continued work absenteeism (10).

25 percent patients in our studied group had various degrees of suicidal ideas. As a matter of fact,

one patient committed suicide. There were a strong positive correlation between HAM-D score and suicidal ideas ($r=0.77$, $p<0.0001$, $r^2=0.60$, a linear correlation, Figure 2); also a strong positive correlation between HAM-D score and psychic anxiety ($r=0.60$, $p=0.002$, $r^2=0.36$, a linear correlation, figure 3). Whereas, in CAPD patients, relations between lack of activity and suicidal ideas, and being single or separated/divorced was also observed.

CONCLUSION

In conclusion, depression and suicidal ideas are important in patients treated by CAPD. Our findings suggest that the higher HAM-D scores of patients undergoing CAPD treatment are associated with suicidal ideas, psychic anxiety and lack of activity. All of those are the leading causes of increased psychiatric morbidity/mortality in patients treated by CAPD.

Table 1: The average age, HAM-D score, CRF and CAPD period.

	Mean±SD	Minimum	Maximum
Age	40.6+12.8	19	60
HAM-D Score	96	2	31
CRF period (month)	55.5±36.5	18	180
CAPD period (month)	20.1 + 10.4	5	41
Room number of house	4±1	2	6
Person number of house	6±3	2	13

Table 2: Causes of CRF in study group.

	Frequency	%	Cumulative %
Glomerulonephritis	7	29.2	29.2
Hypertension	2	8.3	37.5
Chronic Pyelonephritis	4	16.7	54.2
Diabetes mellitus	3	12.5	66.7
Idiopathic	8	33.3	100
Total	24	100	100

Table 3: Sociodemographic informations.

	Frequency(n)	%
GENDER		
1 (Male)	13	54.2
2 (Female)	11	45.8
MARITAL STATUS		
1 (Married)	18	75
2 (Single)	6	25
3 (Seperated/Divorced)	0	0
EDUCATION		
0 (Illiterate)	4	16.7
1 (Primary school)	13	54.2
2 (High School)	7	29.2
3 (University)	0	0
INCOME		
1 (Low)	9	37.5
2 (Middle)	11	45.8
3 (High)	3	12.5
4 (Higher)	1	4.2
FUNCTION		
1 (<50)	2	8.3
2 (50-70)	11	45.8
3(80-100)	11	45.8
OCCUPATION		
1 (Housewife)	11	45.8
2 (Retired)	2	8.3
3 (Self-employed)	5	20.8
4 (Officer)	2	8.3
5 (Worker)	1	4.2
6 (Unemployed)	2	8.3
7 (Student)	1	4.2
RESIDENCE		
1 (Village)	2	8.3
2 (Town)	6	25.0
3 (City)	16	66.7
MEDICAL INSURANCE		
1 (SSK)	7	29.2
2 (Retirement Fund)	6	25.0
3 (Bag-kur)	2	8.3
4 (Green Card)	9	37.5
Total	24	100

Table 4: HAM-D test results of the cases

	Frequency (n)	%
1. Depressive mood		
NOT EXIST (0)	11	45.8
EXIST (1-4)	13	54.2
2. Guilt thought		
NOT EXIST (0)	12	50.0
EXIST (1-4)	12	50.0
3. Suicidal Ideas		
NOT EXIST (0)	18	75.0
EXIST (1-4)	6	25.0
4. Delay in falling asleep		
NOT EXIST (0)	19	79.2
EXIST (1,2)	5	20.8
5. Waking during the sleep		
NOT EXIST (0)	20	83.3
EXIST (1,2)	4	16.7
6. Early morning waking		
NOT EXIST (0)	12	50.0
EXIST (1,2)	12	50.0
7. Loss of activity		
NOT EXIST (0)	16	66.7
EXIST (1-4)	8	33.3
8. Retardation		
NOT EXIST (0)	17	70.8
EXIST (1-4)	7	29.2
9. Agitation		
NOT EXIST (0)	10	41.7
EXIST (1-4)	14	58.3
10. Psychic Anxiety		
NOT EXIST (0)	10	41.7
EXIST (1-4)	14	58.3
11. Somatic Anxiety		
NOT EXIST (0)	6	25.0
EXIST (1-4)	18	75.0
12. Somatic symptoms (GIS)		
NOT EXIST (0)	16	66.7
EXIST (1,2)	8	33.3
13. Somatic symptoms (General)		
NOT EXIST (0)	10	41.7
EXIST (1,2)	14	58.3
14. Genital symptoms		
NOT EXIST (0)	13	54.2
EXIST (1,2)	11	45.8
15. Hypochondriasis		
NOT EXIST (0)	10	41.7
EXIST (1-4)	14	58.3
16. Weight loss		
NOT EXIST (0)	19	79.2
EXIST (1,2)	5	20.8
17. Insight		
NOT EXIST (0)	19	79.2
EXIST (1,2)	5	20.8
Total	24	100

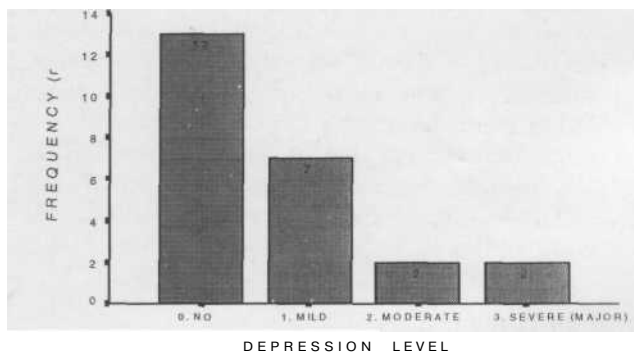


Figure 1: HAM-D score histogram in CAPD group

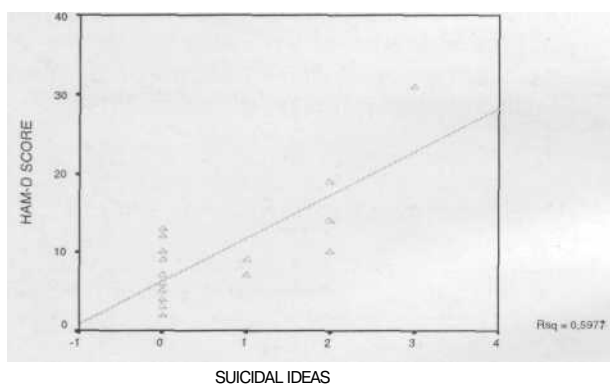


Figure 2: The linear regression curve between suicidal ideas and HAM-D score.

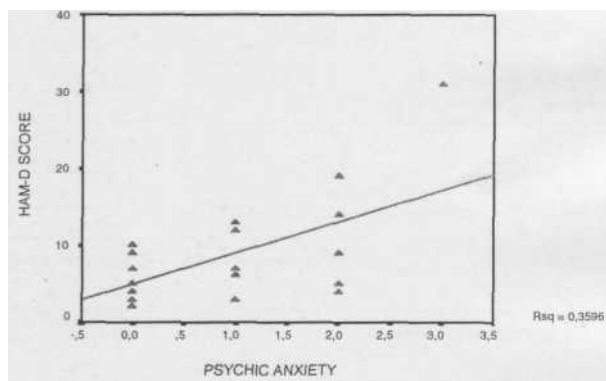


Figure 3: The linear regression curve between psychic anxiety and HAM-D score.

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