

Depression among End-stage Renal failure patients in El-Shifa Hospital

Gaza Strip

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Abstract

Background: The aim of this study was to investigate the nature of depression among end stage renal disease patients, in comparison with a group of chronic patients at Shifa Hospital, and to make a focus on depression as a serious reaction to End stage renal disease.

Subjects and methods: In this study the level of depression was assessed in a sample of 80 adult end stage renal disease cases, and 80 control group of chronic medically ill adult patients aged from 18-75 years. Beck Depression Inventory was used, non probability purposive sampling design was used for a selected sample of end stage renal disease cases hospitalized in the haemodialysis unit, then one control was selected for each case from the chronic patients hospitalized in the medical department, this study conducted in El-Shifa hospital in Gaza-Palestine.

Results: Findings revealed high levels of depression in ESRD patient treated with haemodialysis where as 52% reported severe depression compared to 45% of the chronic patients admitted to other department

Conclusion: Depression is a common psychosocial problem among the Palestinian end stage renal disease population. The coexistence of psychiatric illness in-patients with ESRD who require specialized medical regimens represents a challenge to nephrologists in diagnosis and treatment. Disparities between levels of depression among ESRD patients compared with other chronically ill populations warrant further research.

Key word: Depression, End Stage Renal Failure, Gaza Strip

Introduction

Depression is a common mental health problem among end-stage renal disease (ESRD) patients, especially after the initiation of renal replacement therapy (Israel, 1986). Health professionals show increasing interest with the etiological factors of depression in "end stage renal disease" and medical patients, as: abnormal psychological reaction when facing the diagnosis of end stage renal disease (Rifkin, 1992). Risk factors that predispose the development of depression in "end stage renal disease" and medical patients was a matter of concern by different authors who divide them into personal factors and medical factors (Teri et al, 1994). Depression is a prevalent psychiatric syndrome of "end stage renal disease" population, the spectrum of conditions in which depressive features are present are ranges from normal responses to crises in end stage renal disease to depression (Levy, 1994). The association between depression and medical illness is common; the symptoms associated with medical illness are variable but essentially the same as those with clinical depression (Martin, 1995). Medical factors as; poorly controlled pain, advanced stage of disease with debilitation, mild delirium with poor impulse control and/or hopelessness or helplessness in the context of depression contribute to depression (Thamer, et al, 1996). Malnutrition seen in dialysis patients as hyper catabolism induced by HD itself and regimentation of dietary, fluid, and medication intake. Chronic anemia occurs in most dialysis patients and almost certainly contributes to cardiac hypertrophy, uremic neuropathy, bone ache, muscle cramps and persistent itching (prurities); severe weakness and general

malaise. All these complications and medical risk factors contribute to depression (Lundin & Weiner, 1997).

Others found higher prevalence rate of depression among "end stage renal disease" patients (Rifkin, 1992; Passik et al, 2000). There are different studies examined the adverse effects and consequences of depression in "end stage renal disease". Patients and other chronic medically ill patient's such as (Dimatteo et al, 2000, Schulz et al, 2000). Assessment of depression in chronic medical illness, and difficulties that interfere with accurate diagnosis of depression in end stage renal disease patients was discussed by (Passik et al, 2000). Depression is thought to be the most common psychiatric abnormality in-patients with "end stage renal disease" treated with hemodialysis. Depression can be response to a loss, and "end stage renal disease" patients have sustained multiple losses, including loss of role within the family and workplace, renal function and mobility, physical skills, cognitive abilities and sexual function. Dialysis patients were more likely than non "end stage renal disease" patient's with ischemic heart or cerebrovascular disease to be hospitalized with a diagnosis of depression (Shedler et al, 2001).

Chronic kidney failure usually results in decreased body fat. It is clear that a significant number of patients on Haemodialysis (HD) ingest too little protein and calories to maintain lean body mass. A low serum albumin concentration is the strongest predictive factor for increased mortality.

Based on Palestinian Annual report 2002 data, 43 patients died from chronic renal failure. Out of them 5 were males and 10 were females died due to ESRD, and the others died due to other complications. Number of deaths due to ESRD constitutes 4.1 per 1000 of the total deaths in the same year among adults. Number of deaths among females were greater than number of deaths among males by two folds (MoH, 2003). Hula et al (2005) in a study of 40 chronic renal failure patients, a diagnosis of a depressive or anxiety or somatoform disorder by the was made in 65% of the patients. Fourteen (35%) of the patients had a depressive disorder, 13 (32.5%) of the patients had a somatoform disorder, and 12 (30%) had an anxiety disorder. There was no relationship between any psychiatric disorder and age, sex, duration of dialysis therapy, education, marital status, employment, socioeconomic status.

The aim of this study is to investigate the prevalence of depression among end stage renal failure patients compared to chronic medical patients.

Methods

Subjects

The sample consisted of 80 dialysis patients (42 males and 38 females) who were hospitalized in the haemodialysis unit of Shifa hospital in a given period of time (9th /March / 2003 – 9th /May / 2003). Also 15% out of ESRD subjects kidney transplantation done to them and failed, while 85% of them kidney transplantation not done yet. In addition, 61.2% out of ESRD subjects has

health obstacles forbidden them from kidney transplantation, while 31% has no obstacles. Comorbidity with other medical problems was in 40.6%. Pain was in 8.8% of subjects rating no pain, 28.1% complains from mild pain, 34.4% has moderate pain and 28.8% rating severe pain. While level of physical impairment, 20% out of subjects has no impairment, 23.1% has mild impairment, 32.5% complains from moderate impairment, and 24.4% has severe impairment.

While, the control group consisted of 80 chronic medically ill patients (42 males and 38 females) selected from the medical department. Out of 15% of dialysis subjects had been operated for kidney transplantation and failed. Almost 31% of them were under dialysis for 1-5 years, 29% were for less than one year, and 10% were under dialysis above 10 years. Approval from the Ministry of Health was obtained to apply this study in Shifa Hospital. Consent form was given to every sample element, this consent included information about the study purpose, type of data, subjects selection, potential risks or benefit. A summary of the demographic and clinical characteristics of the sample is presented in table 1.

Table 1 Sociodemographic characteristics of study sample (N=160)

| Items | Controls (N=80) | | End stage renal disease (N=80) | |
|-------|-----------------|------|--------------------------------|------|
| | No. | % | No. | % |
| Sex | | | | |
| Male | 42 | 52.5 | 42 | 52.5 |

| | | | | | |
|-----------------------------------|---------------------|----|------|----|------|
| Age | Female | 38 | 47.0 | 38 | 47.0 |
| | 20-39 years | 17 | 21 | 20 | 31.3 |
| | 40-59 years | 31 | 38 | 30 | 43.7 |
| | 60 + | 32 | 40 | 20 | 20.0 |
| Marital status | Village | 3 | 3.8 | 9 | 11.3 |
| | Camp | 20 | 20.0 | 21 | 26.2 |
| | Single | 9 | 11.3 | 12 | 10 |
| | Married | 62 | 77.0 | 57 | 71.2 |
| | Divorce | 4 | 0.0 | 2 | 2.0 |
| | Widow | 0 | 6.3 | 9 | 11.3 |
| Education level | Illiterate | 18 | 22.0 | 20 | 20.0 |
| | Elementary | 17 | 21.3 | 18 | 22.0 |
| | Primary | 9 | 11.3 | 10 | 18.7 |
| | Secondary | 17 | 21.3 | 14 | 17.0 |
| | Diploma | 7 | 8.8 | 4 | 0.0 |
| | University | 9 | 11.3 | 0 | 6.3 |
| | High degree | 3 | 3.8 | 4 | 0.0 |
| Education level | Illiterate | 18 | 22.0 | 20 | 20.0 |
| Kidney transplantati on rejection | Yes | 0 | 0 | 12 | 10.0 |
| | No | 0 | 0 | 68 | 80.0 |
| Health obstacles | Yes | 0 | 0 | 33 | 41.3 |
| | No | 0 | 0 | 47 | 58.7 |
| Duration | Below one year | 29 | 36 | 13 | 16.3 |
| | 1-5 year | 31 | 38.7 | 13 | 16.3 |
| | 6-10 years | 10 | 12.0 | 32 | 40 |
| | Above 10 years | 10 | 12.0 | 22 | 27.4 |
| Medical comorbid diseases | Yes | 40 | 0.0 | 13 | 31.3 |
| | No | 40 | 0.0 | 00 | 68.7 |
| Rating of pain | No pain | 4 | 0.0 | 10 | 12.0 |
| | Mild pain | 10 | 18.8 | 30 | 37.0 |
| | Moderate pain | 31 | 38.8 | 24 | 30.0 |
| | Severe pain | 30 | 37.0 | 16 | 20.0 |
| Level of physical impairment | No impairment | 18 | 22.0 | 14 | 17.0 |
| | Mild impairment | 17 | 21.3 | 20 | 20.0 |
| | Moderate impairment | 22 | 27.0 | 30 | 37.0 |
| | Severe impairment | 23 | 28.8 | 16 | 20.0 |

Measures

Demographic and clinical measures

Demographic and clinical measures were collected from the patients and medical records. Demographic data include age, sex, marital status, and education.

Beck Depression Inventory (Beck et al, 1988) Arabic version

The original form of (BDI-II) contains 21 items and aims to assess quantitatively the severity of depression is used in this study, it also has a great benefit in clarification of the cognitive aspects of depression. The severity of depression is classified on the basis of the total score as the following: In subjects without chronic illness, a BDI score <15 suggests no or minimal depression, 16 to 24 represents mild to moderate depressive affects, 25 to 33 is moderate to severe, and ≤ 34 indicates severe levels of depression (Garib, 2000). although other rating systems have been employed. In this study, the split half reliability of the scale was high ($r = 0.83$), internal consistency of the scale calculated as cronbach alpha, was also high ($\alpha = 0.88$).

Statistical analysis

The collecting data was analyzed by using the SPSS 12 program. Descriptive statistics and summary statistics, including means, SDs, and frequencies, were used to summarize patient demographics and clinical characteristics. The statistical significance of differences between groups was tested with a

chi-square, *t* –test. Multiple linear regression analysis was used to explore the independent associations of covariates (independent variables: age, sex) and depression as dependent variable.

Results

Depression level

Our results showed that 5% of ESRD patients are not depressed subjects, 8.7% had mild depression, 33.7% had moderate depression, 52.5% had severe depression. For chronically ill patients as control, 5% were within normal, 23.7% had mild depression, 26.5% had moderate depression, and 45% had severe depression, ESRD according to the cut-off point of BDI-II scale. There was a statistically significant difference between ESRD patients and controls with respect to depression toward end-stage renal disease patients ($\chi^2 = 8.75$, $p = 0.05$).

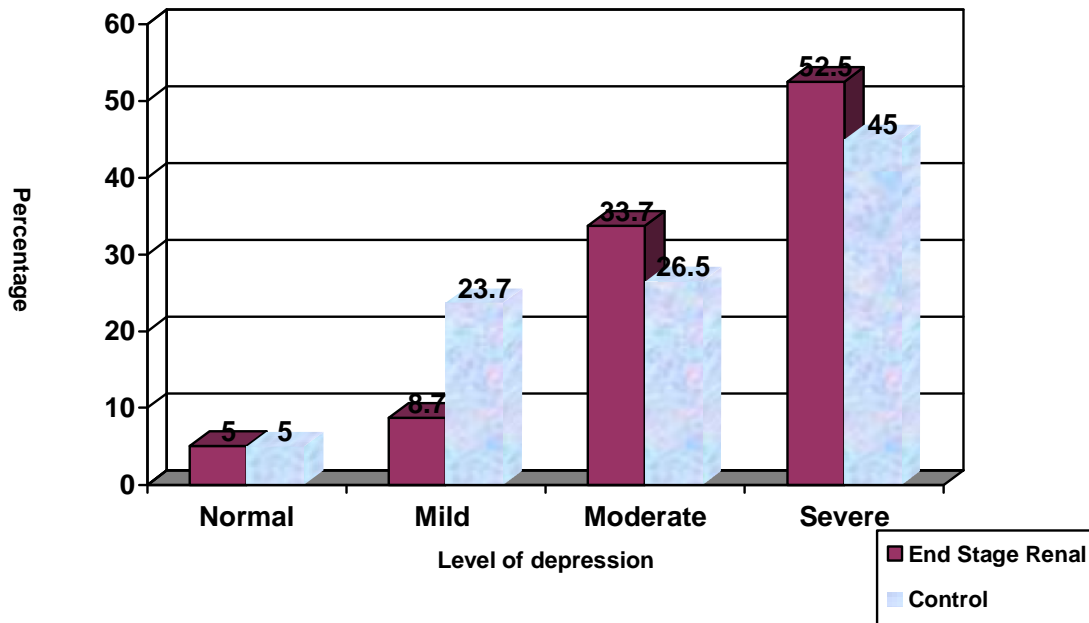
Table 2

Depression in end-stage renal patients and chronic medial patients

| Level of depression | ESRD | | Medical cases (controls) | | χ^2 |
|---------------------|------|------|--------------------------|------|----------|
| | No. | % | No. | % | |
| Normal | 4 | 5 | 4 | 0 | 8.75* |
| Mild | 7 | 8.7 | 19 | 23.7 | |
| Moderate | 27 | 33.7 | 21 | 26.0 | |
| Severe | 42 | 52.5 | 36 | 45 | |

Graph 1

Distribution of the cases and controls subjects according to the level of depression



Depression level and sociodemographic variables in the two groups

The results showed that severe depression was more common in female ESRD patients (68.4% females vs. 38.1% males). There was statistically significance difference toward females ($X^2 = 10.159$, $p < .05$).

Also, level of severe depression was more in patients aged 20-39 years- old (65.6%) compared with those 40-59 years-old (51.9%), and in 60 years-old and above (38.1%). The results found that there is a statistically significant difference in depression toward young patients ($X^2 = 12.805$, $p = 0.05$). But there was no statistically significant difference between level of depression and age control cases.

Table 3

Relationship between level of depression and sociodemographic variables

(Sex and age)

| Level of depression | ESRD (cases) | | | | Medical cases (controls) | | | | | | | |
|---------------------|--------------|------|-------------|------|--------------------------|------|-------------|------|-------------|------|--------------------|------|
| | Female | | Male | | Female | | Male | | | | | |
| Sex | No. | % | No. | % | No. | % | No. | % | | | | |
| Normal | 1 | 2.6 | 3 | 7.1 | 3 | 2.4 | 1 | 2.4 | | | | |
| Mild | 1 | 2.6 | 6 | 14.3 | 11 | 19 | 8 | 19 | | | | |
| Moderate | 10 | 26.3 | 17 | 40.0 | 8 | 31 | 13 | 31 | | | | |
| Severe | 26 | 68.4 | 16 | 38.1 | 16 | 47.7 | 20 | 47.7 | | | | |
| Age | 20-39 years | | 40-59 years | | 60 years and above | | 20-39 years | | 40-59 years | | 60 years and above | |
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Normal | 0 | 0 | 2 | 7.4 | 2 | 9.0 | 1 | 3.7 | 1 | 3.8 | 2 | 7.7 |
| Mild | 1 | 3.1 | 2 | 7.4 | 6 | 28.6 | 6 | 22.2 | 7 | 26.9 | 6 | 20 |
| Moderate | 10 | 31.3 | 9 | 33.3 | 5 | 23.8 | 8 | 29.6 | 7 | 26.9 | 9 | 30 |
| Severe | 21 | 60.6 | 14 | 51.9 | 8 | 38.1 | 10 | 44.4 | 11 | 42.3 | 13 | 43.3 |

Differences between the employment status and degree of depression in ESRD showed that unemployed patients were more depressed than the employed patient's (56.4% vs. 42.3%). There was a statistically significant difference between employed and unemployed subjects ($X^2 = 9.93$, $p = 0.05$). For the medical patients' (controls), the results do not show a statistical differences between employed and unemployed patients'.

1.

Table 4
Relationship between level of depression and employment status

| Level of depression | ESRD cases | | | | Medical cases | | | |
|---------------------|------------|------|----------|------|---------------|------|------------|------|
| | Unemployed | | Employee | | Employee | | Unemployed | |
| | No. | % | No. | % | NO. | % | No. | % |
| Normal | 0 | 0 | 4 | 10.4 | 2 | 0.9 | 2 | 4.3 |
| Mild | 4 | 7.4 | 3 | 11.0 | 10 | 29.4 | 9 | 19.7 |
| Moderate | 19 | 30.2 | 8 | 30.8 | 7 | 20.6 | 14 | 30.4 |
| Severe | 31 | 56.4 | 11 | 42.3 | 10 | 44.1 | 21 | 45.7 |

* $X^2 = 9.913$

** p-value = 0.05

No effect of marital status on severe depression (52.7% married vs. 52.1 % single patients). This also was for control group.

Table 5
Relationship between level of depression and marital status

| Level of depression | ESRD Cases | | | | Medical cases | | | |
|---------------------|------------|------|---------|------|---------------|------|---------|------|
| | Single | | Married | | Single | | Married | |
| | NO. | % | No. | % | No. | % | No. | % |
| normal | 4 | 17.4 | 0 | 0 | 0 | 0 | 4 | 6.0 |
| Mild | 0 | 0 | 7 | 12.3 | 2 | 11.1 | 17 | 27.4 |
| Moderate | 7 | 30.4 | 20 | 30.1 | 7 | 38.9 | 14 | 22.7 |
| Severe | 12 | 52.1 | 30 | 52.7 | 9 | 50.1 | 27 | 43.0 |

* $X^2 = 14.02$

** p-value = 0.01

The study revealed level of depression was more in low income patients' than high income patients (53% vs. 50%). The results showed statistically significant differences between the levels of depression and monthly income variable in ESRD patients ($X^2 = 23.70$, $p=0.01$), For the control cases there was no differences in depression according to income ($X^2 = 7.24$, $p = ns$)

Table 6

Relationship between level of depression and monthly income

| Level of depression | ESRD Cases | | | | Medical cases (controls) | | | |
|---------------------|--------------------|------|---------------------|------|--------------------------|------|---------------------|-----|
| | Below 375 US \$NIS | | Above 376 US \$ NIS | | Below 375 US \$NIS | | Above 376 US \$ NIS | |
| | No. | % | No. | % | No. | % | No. | % |
| Normal | - | - | ٤ | ٢٨.٦ | ٢ | ٣.٣ | ٢ | ١٠. |
| mild | ٦ | ٩.١ | ١ | ٧.١ | ١١ | ١٨.٣ | ٨ | ٤٠. |
| Moderate | ٢٥ | ٣٧.٩ | ٢ | ١٤.٣ | ١٦ | ٢٦.٧ | ٥ | ٢٥. |
| Severe | ٣٥ | ٥٣ | ٧ | ٥٠. | ٣١ | ٥١.٧ | ٥ | ٢٥. |

* $X^2 = 23.70$ ** p-value = 0.01

All ESRD patients whom kidney transplantation was failed were depressed compared with those for whom kidney transplantation has not been done (100% vs. 44.1%). There was a statistically significant difference between the levels of depression in ESRD patients related to failure of kidney transplantation ($X^2 = 12.527$, $p = 0.05$),

Table 7

Relationship between level of depression and kidney rejection

| Level of depression | ESRD- kidney rejection | | | |
|---------------------|------------------------|------|-----|------|
| | No | | Yes | |
| | No. | % | No. | % |
| Normal | ٤ | ٥.٩ | 0 | 0 |
| Mild | ٧ | ١٠.٣ | 0 | 0 |
| Moderate | ٢٧ | ٣٩.٧ | 0 | 0 |
| Severe | ٣٠ | ٤٤.١ | ١٢ | ١٠٠. |

* $X^2 = 12.527$ ** p-value = 0.05

The results showed that ESRD patients who complain of the renal disease above 5 years have severe depression more than the patients who complain of the disease less than 5 years (59.3% vs. 38.5%). There were a statistically

significant difference between the duration of illness and levels of depression in ESRD ($X^2 = 10.539$, $p = 0.05$). For control cases, there was no statistical significant difference between the duration of illness and levels of depression ($X^2 = 7.241$, $p = ns$).

Table 8
Relationship between depression and duration of the disease

| Level of depression | ESRD | | | | Medical cases | | | |
|---------------------|---------------|------|---------------|------|---------------|------|---------------|----|
| | Below 5 years | | Above 5 years | | Below 5 years | | Above 5 years | |
| | No. | % | No. | % | No. | % | No. | % |
| Normal | 4 | 10.4 | - | - | 2 | 3.3 | 2 | 10 |
| Mild | 3 | 11.0 | 4 | 7.4 | 11 | 18.3 | 8 | 40 |
| Moderate | 9 | 34.6 | 18 | 33.3 | 16 | 26.7 | 0 | 20 |
| Severe | 10 | 38.0 | 32 | 59.3 | 31 | 51.7 | 0 | 20 |

* $X^2 = 10.539$

** $p\text{-value} = 0.05$

Discussion

The results of the study showed that depression is a common psychological problem among Palestinian ESRD patients. The results are consistent with other studies, although not all of the results of such studies in interpretation of previous results, it is important to note that ESRD patient suffered from severe depression more than control cases (52.5% versus 45%). Our results were confirmed and supported by a results of a study revealed that hospitalization with depression was higher for ESRD patients compared with other chronically ill patients' (Kimmel et al, 1998). These differences may be due to life stressors and inability of ESRD to cope with the stress of dialysis (Lundin & Weiner, 1997). This is also consistent with Barrett et al (1990) study of patients receiving haemodialysis or peritoneal dialysis, which found that a poor

affect score was the strongest correlate of the somatic symptoms of tiredness, pruritis, sleep disturbance and cramps. In addition, individuals affected by end-stage renal disease are recognized as being prone to depression and anxiety states (Kutner et al, 1986; Shulman et al . 1989). Also others found that self-reported depression, anxiety and emotional stress are highly associated with fatigue and are independently predictive of it in ESRD patients (Chen 1986). This is consistent with Brian et al (2002) who found that 45% of dialysis patients scored positive on the depression screening measure. However our results are higher than other studies. Akman et al (2004) in a study of end-stage renal disease patients found that 7.4% had severe depression, 14.8% had mild depression, and 77.8% were non-depressed.

ESRD patients were making their best efforts to adjust, however they had no role models. Consequently they, and those caring for them, had no expectation for the future. Those obliged to wait for a transplant, because of the need to free needed dialysis space, faced a doubly uncertain future. Obligated to wait for a long period till the consensus of the high specialist medical committee and agreement the board transferred request for kidney transplant operation outside the Gaza Strip. Also the preparation of the donor person and if there is a tissue rejection and tissue typing and tissue matching incompatibility problem, fear of transplant failure or rejection and fear from operation and fear of death, all these critical stressors lead to severe depression. Differences in depression toward the ESRD patients controls may be due to poor adaptation to dialysis process. For many patients, a dependence – independence conflict poses a

barrier to adaptation. A necessary dependence on a machine for life struggles with the independence needed to maintain a normal life. Prolonged stress due to unresolved physiological and psychosocial problems reduce the ability to cope, critical stresses may come more from social situations such as forced job changes or marital problems, fluid restriction the greatest psychosocial stressor and muscle cramps and post treatment. Fatigue were the top physiological stressors, needle anxiety, decreased social life and limitations in other activities, loss of bodily function including a decreased sex drive, changes in family responsibilities with uncertainty about the future, and dependence on staff and doctors. Physiological stresses were seen as being more troublesome than psychosocial ones, and were felt by the patients to be harder to control, also all these stressors and problems lead to frustration and then severe depression. In this study, effects of ESRD in general were larger and trends more consistent for females than for males. Results were appreciably different, depression was strongly associated with females in this study, this difference may be due to biologic differences, changes or marital problems due to changes in self concept and body image, worry and anxiety about general appearance as a female which change and deteriorated due to decreased body fat, periodic puffiness of tissue, a change in skin color to a sallow, jaundiced look, and slowing of body movement, the treatment of haemodialysis causes bruises and punctures in arm or leg, disfiguring plastic shunt and peritoneal dialysis cause distortion of the abdomen, All these changes are considered a big psychosocial stressors to a female who shares the fear from the uncertainty about the future

for the effect of the marital relationship and changes in her family and interferes with desired lifestyle.

Also there is a problem due to the expenses and worries associated with the treatment and the illness, and the uncertainty, anxiety, and costs entailed while waiting for a transplant and the way by which can obtained the needed fund if she is not employed and her husband has low monthly income with big family members especially Palestinian people, now in very difficult socioeconomic status, and because of the woman is not the head of the household her domestic's responsibilities and treatment cost's may be over whelming which increase the level of stress and its interaction with the psychological process that particularly affecting Palestinian ESRD women mental health status.

In this study we found that patients' for whom kidney transplantation was done and then kidney rejection occurred; all these patients' (100%) were affected with severe depression compared with others for whom kidney transplantation has not been done yet, just (44.1%) out of them affected with depression, this is rationalized as these patients' lost the last hops of life survival treatment (kidney transplantation) and return to be independent on a haemodialysis machine which considered the major stress factor on his psychological state, our results are confirmed and supported by the same results of (Lundin & Weiner, 1997).

Our study revealed that there is a statistically significant difference between developing levels of depression and period of starting dialysis in ESRD

patients', patients' with duration of dialysis more than 5 years show high percentages of depression more than duration below 5 years, this difference may be related to loss of hope of survival life, or from bad prognosis and deterioration of general health with severe pain started especially bone ache and increasing patient's disability and dependence on a dialysis machine and medical staff and many complications arise with many losses in life without social support and absence of institutions which take care of those population and without solving their psychosocial problems, depression later in the course of ESRD treatment may be a result of initial denial, or because early hopes of reversibility have not been fulfilled. In addition, the cumulative stress of waiting for scarce cadaver kidneys for 5 years or more may contribute to the development of depression (Kimmel, 1998). Another study revealed that patients' treated with dialysis for more than 5 years were more likely to be hospitalized with a dialysis of a mental disorder, regardless of dialysis modality pattern suggest that psychiatric illness in these patients' are not merely a reaction to the burden of treatment, limited to a brief adjustment phase, but are in themselves chronic conditions (Kimmel, 1998).

Clinical implications and recommendations

It investigate disparities of levels of depression among ESRD patients compared with other chronically ill populations, and reveal that ESRD patients a fatal with depression more than other chronically ill patients.

Depression remain a serious and relatively prevalent problem for chronically ill patients especially ESRD.

Not unexpectedly, depressions were seen as the major responses to the stress of a life on maintenance haemodialysis, and were unable to compensate for the stresses of dialysis so these patients required intensive psychotherapy. We recommended increasing the medical investigation and an active participation of primary health providers. A necessity to establish independent, comprehensive, education, psychosocial adjustment, treatment and rehabilitation center in Palestine for ESRD patients mental disorders in accordance with internationals and Palestinian culture. We have to concentrate subjectively in the treatment programs on psychotherapy and other psychiatric services therapeutic such as: behavioral, occupational, family, and recreational therapy. A need for community support for the Palestinian ESRD patients and their families on both psychological and social levels to enable them to copet effectively, and encouraging out reach programs to reach them at home and give them services in their community. Supportive and preventing through raising religious awareness, since religious has a great in eliminating anxiety, depression, frustration, strengthen the will, and accepting the relatively of the events, and protection against future relapses. Also, we have to prepare teams of social workers, psychologists, clinical psychiatrists, vocational therapists, physiotherapists, and employees in educational rehabilitation to qualifying them how to adapt them in facing the daily life requirement. Studies of treatment methods for mental health disorders in Palestinian ESRD patients,

and review these methods and adopting them to treatment methods ratified by world health organization. Benefiting from universities, research center, and Ministry of Health in Palestine to implement mental health research and classification statistics for the purpose of providing data bases and information banks. There is a need for training programs for the nurses and other health professionals to enable them to assess and manage depressed ESRD patients effectively.

Suggestion for further work

We would like to emphasize those similar studies should be conducted through out Palestine in order to determine the size and reality of the psychosocial health problems among ESRD patients especially depression. Longitudinal research is necessary to clarify the relationship between mental health problems and impact of ESRD. Studies are needed to explicate the risk relation between mental health problems and ESRD impact in Palestinian patients, such as finding makes it possible to identify the high risk patient and to develop early effective intervention program

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