

The quality of life in hemodialysis patients with chronic hepatitis C virus infection

Kronik hepatit C virus enfeksiyonu olan hemodiyaliz hastalarında yaşam kalitesi

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Background/aims: We aimed to determine the quality of life in treated and untreated hemodialysis patients with chronic hepatitis C virus infection. **Methods:** Ninety-five chronic renal failure patients with positive antiHCV/HCV-RNA were enrolled in this prospective study. All patients were questioned using the Short Form-36 (SF-36) health survey to evaluate life quality after the treatment. Fifty-five (ALT>1.5 ULN) were treated with interferon-alpha-2b [3MU/tiw, sc, 6 (30 patients) and 12 (25 patients) months], and 40 (11 renal transplanted) were untreated. Fifteen patients had renal transplantation in a mean of 24.6±12.5 months after interferon-alpha treatment. **Results:** The mean age of the patients was 37±10 years, and 58 were male. The mean durations of hemodialysis and renal transplantation were 6.4±3.8 and 5.9±4.6 years, respectively. Interferon treatment had a negative effect on general health perception, physical activity and anxiety about the disease (p<0.05) when compared with the untreated patients. General health perception scores were positively slightly increased in interferon responder patients (p>0.05). General health and physical activity were better in transplanted patients than patients undergoing hemodialysis (p<0.05). **Conclusions:** General health perception slightly increased positively in interferon responder patients. However, general health perception and physical activity were affected negatively by interferon treatment in the whole group analysis. Renal-transplanted patients have a better life quality compared with those on hemodialysis.

Key words: Hemodialysis, health quality, hepatitis C virus

INTRODUCTION

Quality of life is one of the important indicators of the effects of medical treatment. Hemodialysis patients experience various problems that may adversely influence their quality of life (1). Hepatitis C virus (HCV) infection is also an important problem in hemodialysis patients, especially after renal transplantation while receiving the immunosuppressive therapy (2). This is the most impor-

Amaç: Kronik hepatit C virus enfeksiyonu olan hemodiyaliz hastalarında interferon tedavisi alan ve almayanlarda yaşam kalitesini değerlendirmek. **Yöntem:** antiHCV/HCV-RNA'sı pozitif 95 kronik böbrek yetersizliği olan hasta prospektif olarak çalışmaya alındı. Tüm hastalar SF-36 formu ile tedavi sonrası değerlendirildi. 55 (ALT>1.5 NÜS) hasta interferon-alfa-2b [3MU/tiw, sc, 6 (30 hasta) ve 12 (25 hasta) ay] tedavisi aldı. 40 (11 nakilli) hasta tedavisiz izlendi. 15 hasta interferon tedavisinden ortalama 24.6±12.5 ay sonra böbrek nakli oldu. **Bulgular:** Hastaların ortalama yaşı 37±10 yıl idi, ve 58'i erkekti. Ortalama hemodiyaliz süresi ve böbrek nakilli olduğu süre sırasıyla 6.4±3.8 ve 5.9±4.6 yıl idi. İnterferon tedavisinin genel sağlığına üzerine, fizik aktivite üzerine ve hastalıkla ilgili endişe üzerine tedavi almayan grup ile karşılaştırıldığında negatif etki yaptığı saptandı (p<0.05). Genel sağlık skoru interferon cevaplı hastalarda istatistik anlamlı olmamakla birlikte pozitif olarak artmıştı (p>0.05). Genel sağlık ve fizik aktivite böbrek nakillilerde hemodiyalizlilere göre anlamlı olarak daha iyi idi (p<0.05). **Sonuç:** Genel sağlık algılaması interferon cevaplı hastalarda pozitif olarak daha iyi, ancak tüm hasta grubunda genel sağlık algılaması ve fizik aktivite interferon tedavisinden negatif etkilenmekte idi. Böbrek nakilli hastalarda yaşam kalitesi hemodiyalizlilere göre daha iyidir.

Anahtar kelimeler: Hemodiyaliz, yaşam kalitesi, HCV

tant comorbid disease that can affect their quality of life. Therefore, these patients must be treated if they are candidates for renal transplantation. Life quality is unknown in treated and untreated patients with chronic HCV infection undergoing hemodialysis. We aimed to determine the life quality in treated and untreated chronic renal failure patients with chronic HCV infection.

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MATERIALS AND METHODS

Ninety-five antibody to HCV (antiHCV)- and HCV-RNA-positive chronic renal failure patients were enrolled consecutively in this prospective study. All patients were questioned using the Short Form-36 (SF-36) health survey to evaluate their life quality after the treatment. The SF-36 includes 36 multiple-choice questions, arranged in different categories, four each in the areas of mental health (Role Limitation-Emotional, Vitality, Mental Health and Social Functioning) and of physical health (Physical Functioning, Role Limitation-Physical, Bodily Pain, General Health).

Fifty-five [alanine aminotransferase (ALT) >1.5 times upper limit of normal] patients were treated with interferon (IFN)-alpha-2b (3 MU/tiw, sc) for a median 48 months before administration of the questionnaire (30 received IFN for 6 months; 25 for 12 months). Normal ALT and negative HCV-RNA [by polymerase chain reaction (PCR)] were accepted as therapy response. Fifteen patients had renal transplantation in a mean of 24.6±12.5 months after completing IFN-alpha treatment. Forty (11 renal transplanted) patients were untreated. Individual values were compared with the values of the 40 untreated patients. All of the other known etiologies of chronic hepatitis were negative in these patients. Cirrhosis was excluded clinically. Liver biopsy was not performed because of the bleeding risk in this group of patients. AntiHCV was determined by UBI EIA 4.0 (Organon Teknika, Holland). HCV-RNA was determined by PCR (Roche Cobas Amplicor, Germany).

Informed consent was obtained from each patient included in the study, and the protocol was approved by the local ethics committee. Data are presented as mean±SEM. Data analysis was made by the nonparametric tests and correlation tests SPSS 11.0 version for Windows, where appropriate. A value of $p < 0.05$ was considered statistically significant.

RESULTS

The mean age of the patients was 37±10 years, and

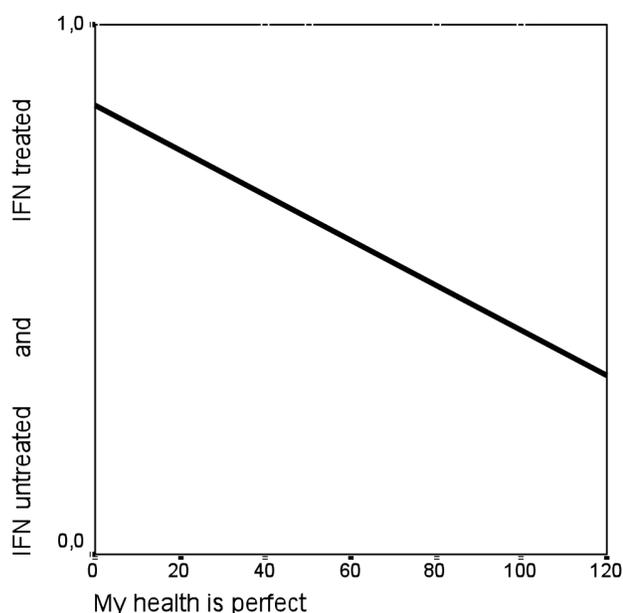


Figure 1. Response to “My health is perfect” in IFN-treated and untreated patients. There was a negative correlation between IFN treatment and health perception ($p=0.014$, $r=-0.23$).

Table 1. Clinical and demographic features of patients

| | Treated (55) | Untreated (40) | p |
|---|--------------|----------------|-----------------|
| Age, years (mean) | 34.8±6.9 | 40.4±13.2 | 0.05 |
| Female/male (n) | 19/36 | 18/22 | >0.05 |
| Hemodialysis/transplantation (n) | 40/15 | 29/11 | >0.05 |
| Duration of hemodialysis, years (mean) | 7±4.3 | 5.6±2.9 | >0.05 |
| Duration of renal transplantation, years (mean) | 4.2±3.8 | 8.3±4.6 | <0.05 |
| ALT, IU/L (mean) | 81.6±111 | 34±25.7 | <0.05 |
| AntiHBs positivity (n) | 45 (81%) | 25(62.5%) | <0.05 |

Table 2. SF-36 scores in IFN-treated and untreated patients

| Scores, mean | PF | GH | RP | BP | SF | RE | MH | VT |
|--------------|--------------|------------|-----------|---------|---------|-----------|-----------|-----------|
| Treated | 71.1±20.3 | 50.3 ±13.6 | 81.4±39.2 | 86.4±24 | 83.4±24 | 75.1±34.5 | 52.4±40.3 | 67.5±35.2 |
| Untreated | 80.5±18.4 | 50.3±13.6 | 92.1±27.3 | 92.3±14 | 90.3±16 | 72.1±33 | 62.6±39.5 | 78.9±27 |
| P | 0.019 | >0.05 | >0.05 | >0.05 | >0.05 | >0.05 | >0.05 | >0.05 |

PF: Physical functions. GH: General health perception. RP: Role of limitations due to physical problems. BP: Bodily pain. VT: Vitality. SF: Social functioning. RE: Role of limitations due to emotional problems. MH: Mental health. VT: Vitality.

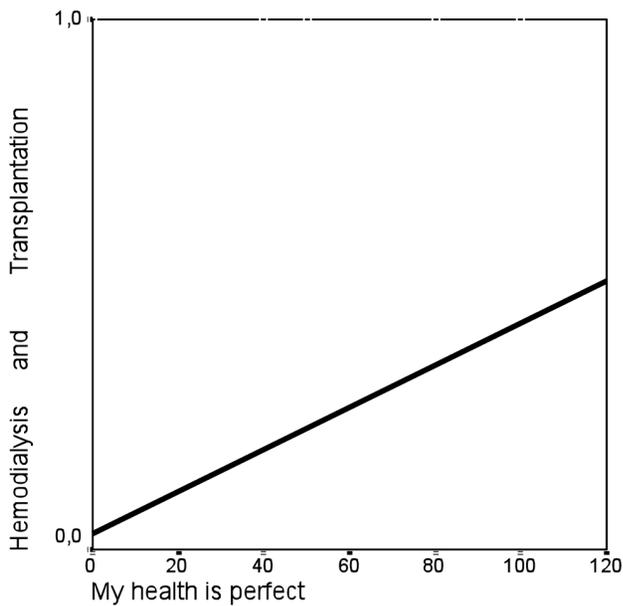


Figure 1. A positive correlation was observed between health perception and renal transplantation ($p=0.004$, $r=0.27$). Response to “My health is perfect” in hemodialysis and renal transplanted patients is shown.

58 were male. Mean durations of hemodialysis and renal transplantation were 6.4 ± 3.8 and 5.9 ± 4.6 years, respectively. Treated and untreated patients' features are shown in Table 1. IFN treatment response rate was 30% and 45%, respectively, in patients who received therapy for 6 and 12 months ($p=0.05$). Statistical analyses were done both in treated-untreated (Table 2) and dialysis-transplanted patients with respect to SF-36 scores. There was a negative correlation between IFN treatment and health perception ($p=0.014$, $r=-0.23$) (Figure 1). Mild and severe physical activity were also limited in IFN-treated patients ($p=0.0028$, $p=0.001$). General health perception scores positively increased in IFN responder patients, but the difference was not statistically significant compared to nonresponders ($p>0.05$). General health and physical activity were better in transplanted patients than hemodialysis patients ($p=0.001$). A positive correlation was observed between health perception and renal transplantation ($p=0.004$, $r=0.27$) (Figure 2). Enjoyment of life was worse in hemodialysis patients compared to those who were transplanted ($p=0.018$). Vitality was statistically higher in transplanted patients ($p=0.017$).

DISCUSSION

In recent years, many physicians feel compelled to evaluate the life quality of patients with chronic

diseases. This may help to define a treatment algorithm in these patients. Unfortunately, we have not succeeded in obtaining 100% response with any therapy in most of the chronic diseases. HCV is an important cause of morbidity and mortality in chronic dialysis patients. In Turkey, HCV is the most common infection (14-82%) in hemodialysis patients (3). Therefore, these patients must be treated if they are candidates for renal transplantation. However, IFN has many adverse effects and long-term virologic response is approximately 37% (4). Therefore, we need to determine life quality in IFN-treated and untreated hemodialysis patients. We performed our study after IFN treatment to evaluate real life quality, because it is known that IFN has several adverse effects that can affect life quality during the treatment. This study showed that health perception is good in transplanted patients and that IFN treatment negatively affects life quality. While there are some studies about life quality in chronic renal failure patients and chronic hepatitis C patients, there is no reported data about the life quality in treated and untreated dialysis patients with chronic hepatitis C. Interestingly, our data showed that general health and physical activity were poor and anxiety about the disease was higher in the IFN-treated patients ($p<0.05$) as compared with untreated patients. Bianchi et al. (5) evaluated life quality in a series of 126 outpatients with chronic hepatitis C (37 on and 89 not on active IFN treatment). They reported that active IFN treatment causes considerable distress in chronic hepatitis C patients, adding to the perceived change in health status caused by liver disease (5). Ware et al. (6) showed that successful treatment of chronic hepatitis C improved health-related quality of life as measured by both chronic hepatitis C-specific and generic measures of functional health and well-being. Our data revealed that general health perception scores had a slight positive correlation with IFN treatment response; however, the difference was not statistically significant when compared with the untreated patients. Our patients were not on active therapy. They received IFN therapy a median of 48 months ago. Nevertheless, our data showed that IFN treatment negatively affected life quality. None of the patients had an active clinical problem when they were questioned.

Renal transplantation positively affects life quality. Ogutmen et al. (7) also showed that transplant renal replacement therapy provided a better

quality of life compared with other replacement methods (hemodialysis and peritoneal dialysis).

In conclusion, the response rate to IFN treatment is acceptable in hemodialysis patients. However,

IFN negatively affects general health and physical activity when compared with untreated patients with chronic renal failure. Transplantation is the best treatment for improving life quality.

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