Evaluation of Knowledge About and Attitudes Towards Kidney Transplantation in Patients Undergoing Hemodialysis Treatment

Hemodiyaliz Tedavisi Uygulanan Hastaların Böbrek Nakli Konusundaki Bilgi Düzeyi ve Tutumlarının İncelenmesi

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ABSTRACT

OBJECTIVE: The aim of the present study was to evaluate hemodialysis (HD) patients' knowledge about and attitudes towards Kidney Transplantation (KT).

MATERIAL and METHODS: A total of 104 HD patients from two HD centers in a large city in central Turkey were included in this descriptive study. The questionnaire that was developed by researchers included questions on sociodemographic data and dialysis vintage, level of satisfaction resulting from HD treatment, willingness to undergo KT, knowledge about KT and choice of donor, etc.

RESULTS: The mean age of the 104 patients was 60.03±17.01 years and the mean of dialysis vintage was 4.53±3.04 years. Of these patients, 62.5% declared their willingness to undergo KT, and among these, 76.9% declared that they had knowledge about KT. In regard to choice of donor, 79.7% stated that it was not important, while 56.7% were not informed about the existence of a waiting list for cadaveric donors.

CONCLUSION: In order to increase in our country the number of cadaveric donors, which represent the most appropriate source of organ donation, several strategies should be considered, such as awareness-raising activities for patients and the community through campaigns by both the public and private sectors, and mass media.

KEY WORDS: Attitude, Kidney transplantation, Knowledge

ÖZ

AMAÇ: Çalışmada, hemodiyaliz (HD) hastalarının böbrek nakli hakkındaki bilgi ve tutumları değerlendirilmektedir.

GEREÇ ve YÖNTEMLER: Tanımlayıcı tipteki bu çalışma, Türkiye'nin büyük bir kentinde iki HD merkezinde, araştırmaya katılmayı kabul eden 104 HD hastası ile yürütülmüştür. Veriler, hastaların sosyodemografik verileri ve diyaliz süresi, HD tedavisinden memnuniyet durumları, böbrek nakli için gönüllü olma, böbrek nakli ve donör seçimi hakkında bilgi durumu gibi soruların yer aldığı ve araştırmacılar tarafından geliştirilen anket formu ile toplanmıştır.

BULGULAR: Hastaların yaş ortalamaları 60,03±17,01 ve ortalama diyaliz süresi 4,53±3,04 yıldır. Hastaların %76,9'u nakil hakkında bilgi sahibi olduğunu belirtirken, %62,5'i böbrek nakli olmak istediklerini ifade etmiştir. Nakil olmak isteyen hastalardan %79,7'si için donör tipi önemli değildi. Hastaların %56,7'si gibi önemli bir oranı ise kadavra bekleme listesindeki mevcut durumu hakkında bilgisi olmadığını belirtmiştir.

SONUÇ: Ülkemizde böbrek nakli sayısının artırılması için en uygun donör olan kadavra vericilerinin sayısının arttırılması amacıyla gerek devlet gerekse özel hizmet veren tüm kuruluşlar tarafından kampanyaların düzenlenmesi, internet siteleri ve medya aracılığıyla hastaların ve toplumun bilinçlendirilmesi gereklidir.

ANAHTAR SÖZCÜKLER: Tutum, Böbrek nakli, Bilgi

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INTRODUCTION

Chronic kidney diseases (CKDs) have become a major public health problem worldwide. Kidney transplantation (KT) is considered the treatment of choice for many patients with end-stage renal disease (ESRD) because quality of life and survival rates are often improved and KT markedly decreases health care costs for society after the first KT year (1,2). According to data from the Turkish Society of Nephrology, in our country the number of patients with ESRD undergoing hemodialysis (HD) treatment as of the end of 2013 was about 53000. By contrast, the number of patients who underwent a transplantation procedure was just 2944 (3). The main reasons for this discrepancy are: an insufficient number of kidneys introduced into the system (supply-demand imbalance), the opposition of patients to kidney transplantation, and a lack of knowledge about kidney transplantation. Therefore, patients generally make a choice between HD and peritoneal dialysis (4-6). The aim of the present study was to evaluate hemodialysis patients' knowledge about and attitudes toward KT in our country and to use these data to develop strategies and policies.

MATERIAL and METHODS

This descriptive study was performed in two dialysis centres between January and March 2014 in Ankara, Turkey. The inclusion criteria for patients were as follows: (a) 18 years of age or older; (b) receiving HD therapy; (c) able to communicate; and (d) an absence of psychiatric disorders that cause cognitive dysfunction, such as Alzheimer's disease or chronic psychosis. Consequently, 104 patients who met the research criteria and were willing to participate were enrolled for the study.

Data Collection and Procedure

Each patient completed a two-part questionnaire. The questionnaire form was designed by the researchers after examining the relevant literature (5-14). The first part comprised demographic data (age, gender, marital status, educational level, employment status) and dialysis vintage. The second part of the questionnaire comprised willingness to undergo transplantation, knowledge about KT, choice of donor type, level of satisfaction with HD treatment, etc.

The approval of the hospital ethics committee was obtained for the study. In addition, the study received permission from the medical directors of the related HD centres. The purpose of the study was explained to each participant in a face-to-face interview that took about 10 minutes each by the researchers, and written consents were obtained from the patients approved to enter this study. The questionnaire form was administered during the second hour of HD therapy by the researchers.

Data Analysis

Data were analyzed using SPSS for Windows, Version 15.00 (SPSS Inc. Chicago, IL, USA) software package. Continuous variables were expressed as mean ± standard deviation (SD), and categorical variables were expressed as numbers and percentages.

RESULTS

The mean age of the 104 patients was 60.03±17.01 years; 51.0% were male; 71.2% were married; and 39.4% had a literate educational level. Of the 104 patients, 86.5% were unemployed, and dialysis vintage was 4.53±3.04 years. More than half of the patients (58.7%) declared their satisfaction with the current treatment method as their complaints were mitigated, while 41.3% of them stated their dissatisfaction with the current treatment because it constrained their daily activities (Table I).

In regard to transplantation, 76.9% of the patients declared that they have knowledge about KT; of these, 69.2% stated they were informed by their practitioners, and 43.3% declared that they were registered on the waiting list to receive a kidney from a cadaveric organ donor; 62.5% of the patients stated their willingness to undergo KT. Of this percentage, 60.9% explained their willingness by saying that they did not want to continue to have dialysis treatment, and 79.7% expressed that it was not important whether the donor was cadaveric or live. Of the patients who did not want transplantation, 85.0% expressed their reason as their advanced age. Patients' knowledge about and attitudes toward KT are given in Table II.

DISCUSSION

Kidney transplantation has become a favourable treatment for end-stage organ failure worldwide. Not only from a lifesaving perspective but also for improved quality of life and economic benefits, transplantation has become the gold standard treatment of choice (15,16). Despite its positive outcomes, patients' knowledge about KT in our country and around the world has been found to be limited (5,6,9,12). In this study, it was found that, contrary to other studies, a major segment of the patients had knowledge about kidney transplantation. This high percentage is thought to originate from the obligation of health care personnel to inform each patient undergoing HD treatment about the opportunity to apply to an organ transplantation center in accordance with recent health legislation (17). Furthermore, HD patients may not be able to express themselves clearly, as they might be anxious about the prospect of having KT. Health care personnel, therefore, should introduce the topic to patients, discuss the procedure, and invite them to ask questions about KT in order to ease their concerns (13,18).

In many Western countries, cadaveric donors comprise the main source of organs for transplantation to patients, but in Turkey live donors are the main source for KT. Contrary to what is desired, a decrease in the number of donors for cadaveric transplantation has been reported, which is a potential source of increasing the number of donors (3,7). Although the Islamic Fatwa Committee of Kuwait stated in 1979 that "organ transplantation can take place from a dead donor providing that there is a necessity to save a human life and that permission of

Table I: Patients' sociodemographic and medical characteristics (n=104).

Characteristics	n (%)
Age (years) (mean ± SD)	60.03±17.01
19-64 years	54 (51.9)
65-84 years	50 (48.1)
Gender	
Male	53 (51.0)
Female	51 (49.0)
Marital status	
Married	74 (71.2)
Single	30 (28.8)
Educational level	
Not literate	11 (10.6)
Literate	41 (39.4)
Secondary	23 (22.1)
High school	14 (13.5)
University and higher	15 (14.4)
Employment status	
Employed	14 (13.5)
Unemployed	90 (86.5)
Dialysis vintage (years) (mean ± SD)	4.53±3.04
Are you satisfied with your treatment method?	
Yes	61 (58.7)
No	43 (41.3)
Reasons for satisfaction with treatment method	
Complaints mitigated	58 (95.1)
Quality of life increased	3 (4.9)
Reasons for dissatisfaction with treatment method	
Daily activities constrained	25 (58.1)
Diets difficult to adhere to	18 (41.9)

*Data represented either as the mean ± SD or as the frequency.

the family is not required since human organs belong to God, not to the family" (5), it was found from the studies conducted that the belief that Islam does not allow patients to receive organs from a cadaver is widely accepted among patients (19,20). In addition, some patients were found to be undecided about their choice of donor (8,10,14). In this study, the patients similarly declared that they did not have a preference for either cadaveric or live donors for transplantation purposes.

Table II: Patients' knowledge about and attitudes towards kidney transplantation and treatment method (n=104).

Characteristics	n (%)
Willingness to undergo KT	
Yes	64 (62.5)
No	40 (37.5)
Knowledge about KT	
Yes	80 (76.9)
No	24 (23.1)
Origin of information*	
Doctor	72 (69.2)
Nurse	17 (16.3)
Internet	13 (12.5)
Knowledge about status in cadaveric pool	
Active	45 (43.3)
Inactive	59 (56.7)
Reasons for willingness to undergo KT (n=64)	
To avoid HD treatment	39 (60.9)
To increase quality of life	18 (28.1)
Recommendations of doctors	1 (1.6)
To live longer	6 (9.4)
Donor choice of patients (n=64)	
Cadaveric donor	7 (10.9)
Live donor	6 (9.4)
Either cadaveric or live donor	51 (79.7)
Reasons for not wanting KT (n=40)	
Age factor	34 (85.0)
Restrained life after transplantation	6 (15.0)

* Participants marked more than one item.
KT: Kidney transplantation, **HD:** Hemodialysis

Transplantation is a successful renal replacement treatment (RRT) method that is capable of achieving renal functions effectively. Although age is not a factor among the criteria for KT, transplantation is often not a preferred solution for older patients due to the existence of comorbid diseases and conditions, and because of their reduced life expectancy (21). In England, there is no age limit placed on transplantation, but only 14% of patients who have had kidney transplants are over 60 years old (22).

Since 2000, the adjusted incident rate of ESRD has grown 7.1% for patients 75 years of age and older to 1,707 per million population in 2011, while rates for those ages 0-19 and 20-44 have increased 10.1% and 4.1%, respectively, to 15.6 and 127 per million. Rates for patients ages 45-64 and 65-74, in contrast, though rising slightly during the decade, are now 8.1-8.3% lower than those in 2000, at 571 and 1,307 per million, respectively (23). Of the 13,522 KTs in 2010 for all age groups in the United States, 53.6% were from deceased donors and 46.4% were from living donors. Of the 2,812 kidneys transplanted to people age 65 years or older in 2010, 784 came from living donors; 329 of those donors were the adult children of the patients who underwent KT. One-fifth, 20%, of kidney transplantations in the United States in 2010 were performed in patients age 65 years and older (24). In our country, by contrast, only 3.09% of transplantations performed in 2013 were in people age 65 years or older (3). In 2010, 13 million people were between the ages of 75 and 84, a figure that will nearly double by 2040 to 24.5 million people. The number of people 85 years old and older will rise to an estimated 8.75 million in 2030 and to over 14 million by 2040. The aging of the ESRD population is leading to an increased demand for renal transplantation by older adults. In carefully selected recipients, patient and graft survival rates are acceptable. Older transplant recipients gain the greatest benefits when transplantation is performed earlier. Older recipients have lower rates of acute rejection but are at higher risk for the complications of over-immunosuppression, such as infections and malignancies (24). When patients are carefully selected and immunosuppressive treatment is applied reasonably, then renal transplantation for older people can be useful, and higher graft survival rates can be obtained (22,25). It has been observed that, in addition to recommendations by health care personnel, persons of advanced age do not prefer to have KT due to their age (6). Also in this study, similar to the literature, patients not willing to undergo transplantation declared their age as a reason.

In the "Regulation on Dialysis Centers" published in 2010 in Turkey, the following provision is noted: "HD centers are liable for informing each patient receiving treatment to apply to an organ transplantation center, and organ transplantation centers are liable for registering patients suitable for transplantation process into the National Waiting List" (17). In this study, although all of the patients were informed about the national waiting list, it was found that most of them had not applied for registration on the cadaver waiting list. Similar to this study, in the study conducted by (11), it was stated that most of the patients had not been registered on the waiting list. Being informed of the existence of such a list is promising in terms of treatment opportunities for patients (13). However, qualitative studies are needed in order to determine the reasons most patients are not registered in that system.

In conclusion, most of the patients that participated in this study had knowledge about kidney transplantation and were willing to undergo transplantation. Although the number of those without a preference for either live or cadaver donors for transplantation purposes is higher, the number of those who were registered on the cadaver waiting list is not as high. We believe that living kidney donors should not be the main source of kidney transplantation in our country; cadaveric organ donation must increase the number of grafts. Therefore, in order to increase the number of cadaveric donors, which is a potential source for kidney transplantation, it is recommended that campaigns be developed by public and private institutions to promote organ donation and to raise the awareness of patients and society through websites and mass media.

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