

Assessment the Levels of Knowledge and Awareness about Organ and Tissue Donation among The Staff of Ministry of Health Ordu University Training and Research Hospital

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Abstract

The aim of this study is to determine the level of knowledge and awareness about organ and tissue donation among the staff from Ordu University Education and Research Hospital. The 25 item questionnaire was prepared and administered to 297 person who accepted to participate in the study. At the end of the study age, sex, and educational level did not change the status of being organ donors. But also thinking about organ donation was unchanged between different age groups, genders, and educational levels. The aim of this study is also to attract attention to the organ and tissue donation and also to raise awareness about this issue. Study has laid out that the level of staff knowledge about organ and tissue donation and also staff interest are not enough. The subject should be reminded to all society starting from health professionals. The importance of organ donation must be emphasized more often in the media.

Key Words: Organ and tissue donation, awareness, knowledge

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Introduction

Organ or tissue transplantation is the procedure of removing a healthy organ or tissue from a cadaver or an individual whose brain death has occurred, and then transplant it so as to undertake the same functions of an organ or a tissue which failed to perform its bodily functions. Organ or tissue donation is defined as the documented permission granted by a living person by his/her own free will for the transplantation of his/her organ(s) and/or tissue(s) to the individuals in need [1]. Advances in the field of donation, and transplantation parallel level of development in health sciences of the country in question. However developments in science, and technology are not sufficient for the countries to reach the required level in domains of organ donation and transplantation. The most important factor on this subject is insufficient number of donated organs and tissues to meet the requirements for those on the waiting list for transplantation.

Organ and tissue transplantation are the most leading healthcare issues in our country, as in all over the world. The number of individuals waiting for organ and tissue transplantation are increasing every day not in proportion with the rate of organ, and tissue donation. Therefore, number of organ and tissue transplantations do not reach the levels to meet the requirements of those waiting for transplantation [1-3].

Although many favourable developments have been made in the field of organ and tissue transplantation, one of the most important stages in organ transplantation is doubtless the procurement of organ or tissue. In our country, as seen in other Asian, and Middle East countries, number of donations do not meet the increased requirements for transplantation. Procurement of cadavers for organ transplantation is far behind the present requirements, and for that reason, the gap increases every day [2,4].

Seventy five percent of the organ transplantations performed in our country are realized by organs transplanted from healthy individuals, while in European countries most of the transplantations (80%) are performed using cadavers [2,4,5]. The way of increasing the number of transplantations from cadavers is accomplished by increasing the number of organ donors. It is not possible to retrieve organs of every donor in every condition. In order to initiate procedures related to organ transplantation, death should occur in hospital setting or

intensive care unit, and organ can be transplanted after definitive determination of brain death of the donor.

The first organ transplantation trials in our country started with 2 cases of heart transplantations performed in 1969 in Ankara, and Istanbul which yielded unsuccessful outcomes. Afterwards, Prof. Dr. Mehmet Haberal performed experimental studies on dogs in Hacettepe University in 1970, and initial successful results were obtained by Dr. Haberal and his team on 3th November, 1975 as a kidney transplantation between living relatives between mother and son. The same team accomplished the first cadaveric kidney transplantation on October 1978 using a cadaveric kidney imported from abroad through the agency of International Eurotransplant Foundation. On 3th June, 1979, the draft number 2238 related to the Organ and Tissue Retrieval, Preservation, Transportation and Transplantation was legalized. Nearly 2 months after enacting of the law, on 27th July, 1979, Dr Haberal and his team, first time in Turkey, transplanted kidney of our citizen died in a traffic accident.

In the world from the year 1967, liver transplantations had been carried on, and continued with better results as the years go by. Meanwhile many Turkish citizens were on the waiting list for liver transplantation, and indeed many of them died during this period.

Dr. Haberal, and his team performed the first liver transplantation on 10th December, 1988. Indeed, organ transplantations gained momentum, and donated cadaveric organs could be delivered to suitable transplant recipients from every part of our country [6].

Numerous advancements have been made in our country since 1969 in the field of transplantation, and different organs, and tissues have been transplanted. In many centers lung, heart, kidney, cornea, and pancreas transplantations have been successfully performed with increasing frequency in Turkey.

Healthcare professionals are thought to be more knowledgeable, and sensitive about organ, and tissue transplantation. However superiority of this sensitivity, and knowledge to the general population is still debatable. With this investigation, we intended to evaluate the level of awareness, and knowledge of the Ministry of Health Ordu University, Training and Research Hospital staff on this issue.

Material and Methods

Our study was performed among 297 personnel working in Ministry of Health, Ordu University, Training and Research Hospital, who gave their consents to participate in the survey between 11th April 2012, and 24th April 2012. Questionnaire forms each containing a total of 25 items were distributed among participants. Data obtained were analyzed by SPSS program. Distribution of data was evaluated by percentages. Personnel who donated or think to donate organ(s) were statistically compared as for age, gender, and educational status using percent rates, and *chi-square* tests.

Results

Age distribution of 297 personnel: males:123 (41.4 %); females:174 (58.6 %) who participated in the study varied greatly 30-39 years: n=132 (44.4 %); 20-29 years: n= 94; 40-49 years, n=60; 50-59 years, n= 11. Distribution of educational levels, and occupations of the participants were as follows: high school, and upper educational levels n=144 (48.5 %); physicians, n=23 (7.7 %); allied healthcare personnel n=106 (35.7 %); security personnel, n=16 (5.4 %); administrative personnel, n=30 (10.1%). Two hundred and seventy four volunteer (92.3 %) participants defined organ donation correctly. To the question about the necessary documents for organ donation, 120 (40.4 %) participants responded as only personal identity information were sufficient and 66 (22.2 %) indicated demographic data plus 2 witnesses. While other responders stated the necessity of health board report (n=59) or found physician's knowledge as a sufficient prerequisite (n=12), and 40 participants ticked the other items of the questionnaire. All items were ticked by 96 (32.3 %) participants as a response to the question of "According to you in which units organ donations can be make? " Majority (n=266; 89.6 %) of the participants correctly stated that organ donation could be made between all histocompatible individuals. Brain death was accurately defined by 95.6 % (n=284) of the study subjects as complete, and irreversible loss of brain functions. To the question " Can a living individual donate organ?" 273 (91.9 %) study participants gave an accurate "yes" response. Besides, 250 personnel (84.2 %) correctly stated that a living donor could return to their normal working, and social life after organ donation. It was determined that our 24 (8.1 %) personnel had made organ donations. Twenty personnel (6.7%) stated that their relatives had received a transplant organ, and 39 personnel (13.1 %) had a close relative who donated an organ. To the questionnaire "Do you think to donate an organ?", 109 (36.7%)

personnel had responded affirmatively, while 61 (20.5%) of them was against organ donation, and 124 (41.8 %) personnel were indecisive on this issue. The justification of “yes” answer was stated mostly (79.8 %) as saving a life or improving one’s health state. Majority (36.1 %) of those against organ donation did not want their body intervened after their death. To the question “In case of need, do you accept to receive an organ transplant?”, 230 participants (77.4 %) marked the “yes” option. Still, 143 (48.1 %) study subjects consented to donate organs of their intimate friends, while some of them were indecisive (n=119; 40.1 %) or reluctant (n=27; 9.1 %) on this subject. Some (n=225; 75.8 %) participants of the survey did not find the organ donation campaigns in Turkey satisfactory. To the question “Recently, how the impact of the news in the media on organ donations became effective on your viewpoint about organ donation?”, 207 (69.7 %) personnel responded affirmatively. Two hundred and thirty (77.4 %) personnel denied the presence of any religious restriction related to organ donation. Besides, 273 (91.9 %) of them admitted legality of organ transplantation in Turkey. Although kidney and heart are firstly cited transplantable organs, 178 (59.9 %) responders marked the “all of them” option. Kidney transplantation was the first transplantation which firstly came to the minds of 211 (71 %) participants.

Age, gender, and educational level were cross-compared with the state of being an organ donor or intent of donation. For the statistical evaluation of data *chi-square* test was used, and statistical significance was determined at $p > 0.05$ without any correlations between parametres. These findings have determined lack of any correlation between parametres of age, gender, and educational level and the state of being a donor or intent of organ donation.

Discussion

Since our survey was conducted among hospital personnel, educational level of 48.5 % of the participants was high school and university comparatively higher than that of the general population Majority (92.3 %) of the responders gave correct answers to the question “ What is organ donation?” [7]. Still 22.2 % of the participants gave correct answers to the question “What documents are needed to make an organ donation?, and 40.0 % of the participants indicated that only identity certificate would suffice [8]. Some (32.2 %) responders marked the “all” option, when asked in which units organ donations could be made [9]. In a postgraduate thesis prepared by Binnaz Tuney, consultant to the study investigating knowledge, and opinions of blood donors about organ donations in Mersin, it was determined

that 94.4 % of the participants knew the definition of organ donation, 17.1 % of them were knowledgeable about the necessary documents for organ donation, and 19.8 of them were cognizant of the healthcare units which could be applied for organ donation. [10]. Most of them (89.6 %) answered correctly about the potential donor, and recipient candidates. In Tuney's study, correct responses were obtained to a similar question in 85.8 % of the participants. Brain death was defined accurately by 95.6 % of the study subjects. To the question "Can a living person donate his/her organ?", 91.9 % of the personnel responded affirmatively, while 84.2 % of the participants believed that organ transplant donors could return to their normal lives after transplantation. When compared with our survey, in Tuney's thesis the corresponding rates of correct responses to the identical questions were 91.9, 87.3, and 67.4 %, respectively.

In our study group 24 (8.1 %) personnel had organ donation certificates, in a study performed by Goz and Gurelli [11] in 2007 among intensive care nurses, and also in a survey conducted by Tuney [10] the corresponding rates were found to be 3.1, and 3.8 %, respectively. Twenty (6.7 %) study participants had organ recipient intimate friends, and 39 participants had organ donors (13.1 %) among their relatives, and 109 (36.7 %) subjects had thought to make an organ donation. In a similar study performed by Akis et al. among the staff of Süleyman Demirel University, 74 % of the participants did not think of donating their organs, 8 of them donated their organs, and 13 % them had no idea about this issue [1]. In our study, the most important reason for those who thought of donating an organ was the idea to save a life or improve one's health state. A 36.1 % of those ticked " no" answer, indicated that they didn't want someone "manipulating" their dead body. To the question " In case of need, do you want to undergo transplantation?", 77.4 % of the participants gave affirmative responses. When the participants asked if they wanted to donate the organs of their dying intimate friends?, 48.1 % of them gave affirmative responses. The percentages of the answers "no", and "I have no opinion" were retrieved from 9.1, and 40.1 % of the participants, respectively. In the study by Tuney, these rates were similar to ours. However 75.8 % of the participants did not think that organ donation campaigns are satisfactory in our country. In a similar study performed by Ozer et al among nursing students in 2010, 56.1 % of the students gave negative responses to an identical question [12]. News about organ, and tissue donations in the media were evaluated favourably by 69.7 % of our study participants. Majority (77.4 %) of our study group did not think that organ transplantation was a religiously forbidden procedure. In

a 2010 study conducted by Kilic et al. In female university students, the corresponding rate was found to be 95.1 percent [4]. This rate was quite different (29.3 %) in a study by Ozer et al. [12]. These diversities demonstrate different religious viewpoints on organ donation in various regions of our country. Therefore favourable opinions of Directorate of Religious Affairs on this issue should be frequently expressed by this authority, and healthcare institutions in order to illuminate the public. Most of the participants (91.9 %) expressed that organ donation was legal in our country, and majority of our personnel knew the legal status of organ donation in our country. Since kidney transplantations were the first successful, and frequently performed transplantations, expectedly kidney transplantation firstly came to the minds of the participants, when asked about organ transplantation.

Age, gender, and educational level of the participants were cross-compared with the state of being donated an organ or thought of donating, and retrieved data were statistically evaluated using chi-square test without any significant correlation between these 2 sets of parameters at a significance level of $p > 0.05$. This lack of correlation detected in our study group might be thought to stem from our study group of healthcare personnel. However their level of knowledge about organ transplantation, and donation did not vary very much with age, gender, and educational status. Besides our study revealed the fact that ministry of health, and related non-governmental organizations should continually revive this issue in order to increase knowledge level concerning organ donation, and transplantation.

Recently, face, and arm-leg transplantations were performed in medical faculties of two prominent universities of our country which have not been realized before. These achievements have demonstrated us that transplantations similar to those carried on in leading transplantation centers can be also performed in our country. In our survey, we inquired our personnel about their impressions, and perspectives related especially to these recent transplantations which attracted intense attention of the media. Within this context, we have concluded that thanks to recent transplantations achieved in our country, awareness of our hospital staff has increased, and they have begun to think of organ donation after these transplantations.

In our country, first time in 1979, the Article number 2238 was enacted in order to organize organ and tissue transplantations, and afterwards many regulations were implemented based on this article. The last amendments were enacted, and became effective with the publication

of the regulation in the official gazette dated February 1, 2012, which concerned organ and tissue transplantation services. With this regulation, financial demands from patients, and other unethical activities during organ and tissue donation, and transplantations not permitted by social security institution are prohibited. These and similar regulations are enacted by many governments. For example, some legal regulations have been enacted in Islamic Republic of Iran to prevent organ donation for financial profit, and preclude organ, and tissue transplantation tourism [13].

Some sectors of our community entertain religious concerns about organ donation Islam, Christianity and Judaism, because of their common origin have similar concepts about sanctity of life and death, creation, and relationships between God and mankind. These three religions encourage live or cadaveric organ transplantations based on brain death criteria [11]. In our country Higher Council of Directorate of Religious Affairs has encouraged organ donation and declared that organ donation is the most beneficial act realized by human beings. Despite this encouraging attitude, in our community, debates about religiously objectionable nature of organ donation are still in vogue. In our questionnaire survey, 77.4 % of our hospital staff responded to the relevant question “Is organ donation religiously profane?” as “ no, not at all.”. One can think that our hospital personnel has sufficient level of knowledge about this subject.

Conclusion

Our study group of healthcare personnel which differed in their educational levels, and occupations have demonstrated that in recent years successively performed organ and tissue transplantation have come to the agenda of the media, and thus focused increased rates of attention on this issue. We have thought that, even our questionnaire survey of 25 items, which we prepared to rate the level of knowledge of the personnel might have contributed to the increased awareness on this issue. It should not be forgotten that organ and tissue transplantations can be only realized by organ and tissue donations, and continually reviving this issue will contribute to the investigations performed on this subject.

References

1. Akış M, Katırcı E, Uludağ H.Y, Küçükılıç B, Gürbüz T, Türker Y, Kayacan H, Öngel K, Gül H; Süleyman Demirel Üniversitesi personelinin organ-doku bağıışı ve nakli hakkındaki bilgi ve tutumları. S.D.Ü. Tıp Fak. Derg. 2008;15(4):28-33.
2. Sönmez Y, Zengin E, Öngel K, Kişioğlu N, Öztürk M; Attitude and Behavior Related to Organ Donation and Affecting Factors: A Study of Last-Term Students at a University; Transplantation Proceedings. 2010;42:1449-52.
3. Edirne T, Türkiye’de Organ ve Doku Nakli Uygulamaları: Sonuçları ve Strateji Önerileri. T Klin J Med Sci. 2004;24:261-6.
4. Kılıç S, Koçak N, Türker T, Gürpınar H, Gülerik D; Kız üniversite öğrencilerinin organ bağıışı konusundaki tutumları ve bu tutumlarına yönelik etki eden faktörler; Gülhane Tıp Dergisi. 2010;52:36-40.
5. Yaşar M, Oğur R, Uçar M, Göçgeldi E, Yaren H, Tekbaş Ö. F, Korkmaz A; Bir sağık meslek yüksekokulu son sınıf öğrencilerinin organ bağıışı konusundaki tutumları ve tutumlarına etki eden faktörler; Genel Tıp Derg. 2008;18(1):33-7.
6. The development of transplantation in Turkey. (Accessed 30.05.2012, at www.tond.org.tr.)
7. Hacettepe Üniversitesi Doku ve Organ Nakli Merkezi. (Accessed 30.05.2012, at www.organnakli.hacettepe.edu.tr)
8. Organ ve Doku Alınması, Saklanması ve Nakli Hakkında Kanun. (Accessed 30.05.2012, at <http://www.mevzuat.adalet.gov.tr/html/526.html>)
9. Organ Nakli Koordinatörleri Derneğı. (Accessed 30.05.2012, at www.onkod.org)
10. Tüney B, Altıok M, Kan bağıışında bulunan bireylerin organ bağıışına ilişkin bilgi ve düşünceleri, Mersin Üniversitesi Sağık Bilimleri Enstitüsü Hemşirelik Anabilim dalı yüksek lisans tezi (yayınlanmamış yüksek lisans tezi)
11. Göz F, Gürelli Ş.Ş; Yoğun bakım hemşirelerinin organ bağıışı ile ilgili düşünceleri; Fırat Sağık Hizmetleri Dergisi. 2007;2(5):77-88.
12. Özer N, Sarıtaş S, Özlü Z.K; Hemşirelik öğrencilerinin organ nakli ve bağıışı konusundaki bilgi ve düşüncelerinin incelenmesi; Anadolu Hemşirelik ve Sağık Bilimleri Dergisi. 2010;13(2):1-11.
13. Mahdavi-Mazdeh M, Heidary-Rouchi A, Aghighi M, Rajolani H; organ and tissuetransplantation in Iran. Saudi J Kidney Dis Transpl. 2008;19(1):127-31.