

A Monographic Evaluation of the Organ Transplantation in Turkey, from the Ethical and Legal Points of View: Review

Türkiye'de Organ Aktarımının Yasal ve Etik Boyutuna İlişkin Monografik Bir Değerlendirme

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ABSTRACT Organ transplantation is a method of solution for the problems in situations that severely impair the maintenance of life in an individual, because of functional disorders in a tissue or organ. Organ transplantations are no longer operations that carry risks, but they are safe and successful surgical interventions that maintain long-lasting recovery periods, increase quality of life, and are more commonly applied in a gradually increasing manner. Besides its medical aspects, organ transplantation has an extremely wide range of social, legal and ethical features. Validation of the moment of death, permission of donor, and cash benefit from organ transplantation are the matters of debate all over the world, regarding the ethical considerations. Regulation of all these issues by laws does not mean that the procedures are proper for ethical norms, but since compliance with laws has been maintained, limits of the criminal or legal liabilities are also defined. The National Coordination System is the most fair regulation in the organ allocation. The organs controlled by the Turkey Organ Control System are legally provided for the proper patient who is medically the most urgent and in a great need, according to the order of priority in the list. The aim of this study is to evaluate the problems associated with the organ and tissue transplantations, by considering the legal and ethical aspects that are specific for Turkey.

Key Words: Organ transplantation; ethics; legislation & jurisprudence

ÖZET Organ aktarımı; doku ve organların işlevsel bozukluklarına bağlı olarak bireyin hayatta kalma yeteneğinin ciddi şekilde etkilendiği durumlarda başvuru bir çözüm yöntemidir. Organ aktarımları artık risk taşıyan operasyonlar olmaktan çıkarak uzun süreli iyileşmeler sağlayan, yaşam kalitesini artıran, güvenli, başarılı ve giderek yaygınlaşan cerrahi bir uygulama haline almıştır. Organ aktarımı tıbbi yönü dışında olağanüstü geniş sosyal, hukuki ve etik boyutları da bulunan bir alandır. Ölüm anının tespiti, vericinin rızası, organ aktarımından maddi kazanç sağlanması tüm dünyada etik açıdan tartışılmalı konulardır. Yasalarla tüm bu konuların düzenlenmesi, yapılan işlemlerin etik açıdan uygun olduğu anlamına gelmemekte, ancak hukuka uygunluk sağlandığı için cezai veya hukuki sorumlulukların sınırları da çizilmiş olmaktadır. Organ dağıtımında en adil düzenleme Ulusal Koordinasyon Sistemi ile dağıtımdır. Türkiye Organ Denetim Sistemi ile denetimi yapılan organlar, yasal olarak, tıbben en acil ve en çok gereksinimi olan uygun hastaya, listedeki öncelikli sırasına göre verilmektedir. Çalışmanın amacı, organ ve doku aktarımının beraberinde getirdiği sorunları, Türkiye özelinde yasal ve etik açıdan ele alarak bir değerlendirme yapmaktır.

Anahtar Kelimeler: Organ transplantasyonu; etik; yasama ve hukuk bilimi

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ORGAN TRANSPLANTATION

Organ transplantation is the method of transfer of an intact tissue or organ received from a live donor or cadaver (from an individual existing with brain death), to a new body to maintain the same

function, in situations that severely affect the maintenance of life in an individual because of functional disorders existing in these tissues and organs. Organ transplantation is currently accepted as a routine, valid and advanced method of treatment in various chronic organ diseases, that is applied for saving individuals from life-threatening conditions, prolonging their lives and increasing their life qualities.¹ With the recent medical applications, organ transplantations are no longer operations that carry risks, but they are safe and successful surgical interventions more commonly applied in a gradually increasing manner, offering long-lasting recovery periods and improving the quality of life.¹⁻⁴ In the patients with no life expectancy due to organ failure or loss, possibilities are provided to minimize the risk factors which may affect their healths, and the life expectancy is reached or even it is exceeded following the organ or tissue transplantation.¹⁻⁴ The major limitation to the application of more transfers in Turkey and all over the world is the limited number of organs that would be transplanted, which increases the importance of managing the organ allocation.^{1,2}

Transfers from cadavers are preferred more compared to the living donors. The cadaveric donors are individuals without a chronic illness and with brain death in the course of treatment in the intensive care unit, due to acute disorders, whose family members give a consent for transplanting their organs.^{3,5} Regulations related with this subject have been arranged with Organ and Tissue Procurement, Preservation, Grafting and Transplantation (LAOTPPT), with Law No. 2238 and date 29.05.1979 which is appurtenant to Republic of Turkey. With this law, "the purchase and sale of organs and tissues have been forbidden for any cost or other benefit" and any advertisement concerning organ and tissue donation and receipt has also been forbidden, except for the distribution of scientific and statistical data and information with property of news.⁶

Due to the difficulties experienced in providing organs from the cadavers, living donors can be also used as suppliers of organs. If compatibilities of criteria such as tissue and blood group exist, the

first-degree or close relatives or the partner of the patient waiting for transfer can serve as live donors. The kidneys and liver are the organs which can be transferred from live donors.⁷

A BRIEF HISTORY OF THE ORGAN TRANSPLANTATION AND THE RELATED ASSOCIATIONS

Descriptions related with the organ transfer are present in engravings of the antique periods; however factors that accelerate the studies in organ and tissue transplantation existed with the experiences of treating injuries in wars of the end of the 19th century and the first half of the 20th century, as well as the wider utilization of anesthesia and antiseptics. The initial transfers were made in experimental studies conducted with animals with the aim of treatment; these were followed by studies conducted with humans.¹ The first experimentation has begun with a kidney transplantation performed with animals in Vienna, 1902. Following that it has performed with humans in Russia, 1933 by the Russian surgeon Voronoy who made transfer from a cadaver.^{5,8} The first kidney transplantation from a living human was applied in 1947 in the United States of America with failure.⁸ The kidney was transplanted from a dead individual in 1950 in Chicago and from a living donor in 1952 in Paris; however these patients died in a short time of period.⁸ Dr. Joseph Murray transplanted kidney from an identical twin in 1954 and the patient undergoing transplantation lived for eight years. This case exists in the historical reports as the first successful transfer from a living donor. The first successful heart transplantation was applied in 1967.⁹ Carrel (1912), Medawar (1960), Dausset (1980), and Murray (1990) exerted an extraordinary effort in this field and these pioneer scientists deserved the right to win the Nobel prizes in medicine.¹⁰

To facilitate the organ allocation and transportation regulations, the National Network of Organ Allocation was constructed in the United States of America in 1977. Organ donation was recognized by law in most of the European countries recorded under the National Record Systems. In France and Portugal, individuals who have not made organ donations are essentially recorded. In

other countries, consents of organ donation of the individuals and the views of their families are taken into consideration.^{10,11} To facilitate organ donation, to prevent organ-wasting, and to identify the most proper recipients in Europe, a private foundation named Euro-Transplant has been founded by the Dutch immunologist Jon Van Rood.¹¹⁻¹³ The organization does not aim to make any profit. Belgium, German Federated States, Luxembourg, Holland and Austria take place in this organization working in a coordinated manner. France, Switzerland, Spain, Denmark, Finland, Norway, Sweden and Slovenia work in coordination in this organization, the last member of which is Croatia, accepted in 2007.¹¹⁻¹³ This organization initially functioned as laboratories of tissue-typing with a larger pool of donors over time based on the immunological pairing. The great number of member countries in this organization has increased the number of donors and the possibilities of transfer, and a fair allocation has been maintained.^{10,11}

The first heart transplantation in Turkey was applied in 1968 at Ankara Yüksek İhtisas Hospital by Kemal Beyazıt; however, the patient died.¹⁰ The kidney transplantation from a mother to her son was achieved by Mehmet Haberal and his team in 1975 at Hacettepe University Hospital of Medical Faculty and this was the first successful organ transplantation from a living donor.¹³ He achieved the first transplantation from a cadaver in 1978, using the kidney provided from America by the Eurotransplant. In 1979, the legal regulation was made by the "LAOTPPT with Law No. 2238". Following this regulation, the first transfer was achieved with the organ provided from a native cadaver.^{8,10,13} The first liver transfer was performed in 1988, the first successful heart transplantation was achieved in 1989, and transplantation of the heart valve was applied the first in 1991.¹⁰ Beginning from 1998, a total of nine lung transplantations were performed; of these, five were heart-lung transfers, but the outcomes were not fully successful. Süreyyapaşa Lung Transplantation Study Group (SLTSG) was founded in 2007 with the leadership of Cemal Asım Kutlu, in order to start the program for lung transplantation.¹⁴ Following the

change of "Instruction for Organ Transplantation" by the Ministry of Health, the official permission was given the first to a hospital in Turkey in december 2008, to perform only the lung transplantations, and the first successful lung transplantation was achieved.¹⁵

The Turkish Organ Transplantation and Burn Treatment Foundation was established in 1980.¹³ The Turkish Association for Organ Transplantation was founded in 1990, and the Association for the Coordination of Organ Transplantation Organizations (ACOTO) was founded in 1994, in order to improve the communication between centers. In order to increase the number of organ transfers in our country, the Regulations for the Organ Transplantation and Services in Health 2000 has come into effect, and the National Coordination System (NCS) for the Organ and Tissue Transplantation was founded by the Ministry of Health.^{4,16,17} This organization includes the coordination committee, scientific committee, and the coordinators' committee; its main functions are to provide the communication between the team of organ removal, and the regional hospitals in Turkey, and to maintain the organ transplantation.¹⁷⁻¹⁹ In order to increase the functionality of the National Coordination System, the National Organ and Tissue Coordination Center (NCC) was established in 2001, which is in connection with the General Administration of Treatment Services, the Ministry of Health. Nine Regional Coordination Centers (RCC) were founded in Adana, Ankara, Antalya, Bursa, Diyarbakır, Erzurum, İstanbul, İzmir and Samsun, which are in control of the National Coordination Center. The Regional Organ and Tissue Transplantation Centers organize the activities of transplantation in the cities in their centers. They are responsible for the procurement of potential donor, determination of the most proper recipient, and solving the medical and legal problems related with transplantation. The regional coordinators are responsible for the transportation of removed organ and donor to the hospital.¹⁹

When a case with brain death or organ donation exists in any hospital all over the country, Coordinator of the Organ Transplantation charged in

hospital communicates with the Regional Coordination Center. The Organ and Tissue Transplantation Coordination Center gives the information about donor to the National Coordination Center. The National Coordination Center communicates with the coordinator of the Regional Organ and Tissue Transplantation Center/hospital which is in order to receive donated organ, in order to maintain the transplantation of organs or tissues in national donor pool, to the most proper patient in the country waiting for organ.^{4,20} Although our country has such a systemic organization, transplantation centers with sufficient equipment, and experienced scientists, number of organ transplantation doesn't reach to unsatisfying levels due to the limited organ donation.

BRAIN DEATH AND ORGAN TRANSPLANTATION FROM THE RELIGIOUS POINT OF VIEW

The protection of one's own life, and saving another's life are the principles of moral responsibilities in all religions. In all approaches related with organ transplantation, attitudes and considerations are developed regarding these two basic principles. Except for some reservations that some religious traditions put forward in some specific situations, generally none of the religions forbid organ donation, or receipt of a donated organ. Many belief systems even encourage organ donation. Besides some merits including saving a life, protecting from emotional pain and misery, doing favor and kindness; resurrection, destiny and reincarnation are other beliefs that are also taken into consideration by religions. Suggested risk for the life of individual is the most commonly discussed issue in organ donation; this is why the transfer of vital organs is not permitted, and it is assumed that these organs should be transplanted only following the complete death of individual.²¹

Patient rights may be considered as the reflection of human rights to the field of health services, and must include respect for the beliefs and personal conviction, which is one of the main human rights and freedoms.²² This is why the religious considerations of individuals are important in organ donation. Most of the monotheistic religions

in the world confirm and support organ donation.¹⁴ Organ donation does not have a religious disadvantage in the Islamism. Turkish Republic Presidency of Religious Affairs, Religious Affairs Supreme Council defined organ donation as the greatest favor that a human can provide to another human, and declared that organ donation is religiously permissible, with the date and number of decision 3.3.1980 and 396/13; this decision has been based upon the 32nd verse of Maide Sura in the Quran ("the one who has given life to a human, would gain reward as if he had given life to all humans"), and the other Islamic rules.^{10,14}

The resurrection is another important Islamic belief. Possibility of impaired body integrity during resurrection leads to aversive approaches about organ donation. The 3rd and 4th verses of the Kiyame Sura clarify this issue, as follows: "Does the human assume that we can not join his bones? Yes, we have the power to make even his fingertips exist in their previous states".²³

The International Commission of Islamic Law is responsible for the development of common attitudes about religious questions, regarding the Islamic countries; in Saudi Arabia in 1988, this commission stated that organ donation and organ transplantation from a cadaver are religiously acceptable, and also stated that purchase and sale of organs are not proper. The rewarded donation was recommended to be reinterpreted and re-discussed, from the religious point of view.⁷

The Presidency of Religious Affairs is closely involved with decisions about religious questions, and the latest explanation about face transplantation was as follows: "Application of face transfer is principally an aesthetic surgical procedure performed for treatment. The face, in fact is not an individual organ; however it is a part of the head, and may thus be considered as an organ. Therefore the statements declared for organ transfer have to be also valid for the face. So for the procedure of face transfer, principles like the permission of parents (or tutor) of donor, and not demanding wage for the organ, have to be taken into consideration".²⁴

In situations related with organ donation and transplantation, the Christian tradition frequently mentions about good relations with the neighbours and helping them, and the principle of not to be egoistic. It accepts the organ donation and transfer as manifestations of Christian love. According to the Catholic church, organ transfer can be accepted when the individual who will donate confirms this donation, without causing any risk for his own life. In the religious references, it is stated that resurrection will exist with the eternal bodies but not with the present bodies, and that the body after death will not decay and it will arise from the seed of the present body, but it will be different. According to these beliefs, resurrection will exist with the new bodies, and therefore donation of any organ by an individual is not controversial to the death-after life fidelief.²⁵ Primarily the Catholic Church, and the other Christian tradition approach positively to the donation and transfer from a cadaver.²⁶

The Jewish tradition is also positive about organ transfer from a cadaver; however some religious specialists do not approve organ transplantation from a cadaver due to the considerations in Jewish law about the injury existing in dead body/corpse, the benefit got from a dead body, and delay in burial.²⁷ Pregnancy existing as a result of semen transfer from a dead individual has also been approved by a legal regulation in Israel, where the Jewish religious tradition is highly effective by institutional arrangements.²⁸

In the Indian religious beliefs, consideration of destiny is effective in the present body of an individual, or in the organs which are the parts of this body. In beliefs of fate/destiny included in the Indian religious traditions, organ donation and organ transfer are generally evaluated as appreciable approaches, "if they would be useful for humans, would prevent a problem and if they include favour". These attitudes are considered to be useful for the individual for having a better condition in his following second life. In this regard, it is assumed that donated organs of a favourable individual would also transfer his favourable fate and personal characteristics to the organ-transferred

person. Thus individuals who donated their organs, and ones who are in charge with transfer of these organs, achieve an important function to also heal the others and to make them "clean".²⁹

ORGAN TRANSFER IN THE TURKISH LAW

In Turkey and many other countries, there are laws in living-donor transplantation that ensure the rights of donor, prevent their abuse, and also prevent the organ trade. In our country, rules related with organ transplantation have been determined and applied by the medical professional organizations, till the year 1979. By the Committee decision of the Turkish Medical Association in 1968 related with the organ and tissue transplantations, and by a decision of the Supreme Council of Health in 1969, it had been declared that the brain death would be taken into consideration.⁷ According to the 17th statement of the Turkish Republic Constitutional Law of date 1982; the right of living maintenance of an individual, and the body integrity have been protected by the definition that "everyone possesses the rights to live, and to protect and develop his moral and material existences, and except for the medical obligations and the situations stated by law, the body integrity of an individual is inviolable."^{5,22} This statement of the Constitutional Law forms base for the 23rd statement of the Turkish Civil Code.^{24,30} According to this statement; no one can abandon even in part, his rights and capacities to act. No one can abandon his freedoms or can limit them contrary to law or morality. The purchase, grafting and transplantation of biological materials of human-origin are possible with written consent. However act fulfillment can not be demanded from one who has been in dept for giving biological material; material and moral indemnities can not be demanded.^{30,31}

According to the 4th statement of the prevailing LAOTPPT Law No. 2238, in our country; except for the distribution of scientific and statistical knowledge and information possessing property of news, any advertisement related with donation and receipt of organ and tissue, and removal of organs and tissues that would absolutely end or jeopardise the life of donor, have been forbidden.³² As it is the

case in poorly-developed and developing countries, organ trade is sometimes made also in our country, via the organ mafias. This problem unfortunately exists also in our country, and understanding of organ donation from a dead individual has not completely existed yet.³ Despite this fact; the problem of “depressing” the will of people regarding organ donation, the possibilities of violating the right of living and the personal rights of donor, the results that are contrary to law which exist in applications against laws, as it is the case in campaigns related with organ donation, and finally the ethical problems are not sufficiently considered.³³

As it is the situation in many countries, commercial activities like purchasing or selling living-donor organs in exchange for money or material benefits, are forbidden by laws also in our country. The organ trade and its international traffic have been damned by the World Health Organization, in 1989. Application of organ transplantation in exchange for money is also contrary to the principles of the National and International Societies of Transplantation.¹ However due to inefficiencies in the laws that forbid organ trade, and because of inefficient control, or via the illegal means, living-donor kidneys are provided in exchange for money or material benefits, especially in countries where social and ethical values are not taken into consideration.³⁴

The living right of individuals is protected by the 15/II. Statement of the Turkish Republic Constitutional Law, with the determination of “the right of living, and moral and material integrities of an individual are inviolable”.⁵ Some physicians also in our country mediate the organ trade, and thus behave contrary to the medical ethics and the Law numbered 2238; this is a commitment of crime in consideration of the Turkish Penal Code (TPC) Law Number 5237.^{6,34} The 91st statement of the TPC, No. 5237, also **forbid** the organ trade. This statement is defined by the title of “Organ or Tissue Trade”.³⁵

This regulation protects the individuals’ living rights, body integrities, and freedoms of will in personal regards; in general, the human honor is pro-

tected. The open consent system, in other words, model of agreement is accepted in obtaining organs from a deceased donor, and imprisonment is predicted for persons who take organs unlawfully, without a valid consent.^{33,34} In the 15th statement of the Law Number 2238, it is stated that “being contrary to this law; a person who takes organs and tissues, or hides, delivers and acts in implantation, and a person who purchases and sells organs and tissues or mediates the purchase and sale of them or acts as a commission agent in these activities, is sentenced to imprisonment from two years to four years if the act does not require a more major punishment, and punitive fine is imposed from 50.000 liras to 100.000 liras”. This statement declares clearly the type of punishment in these cases. In organ transplantation, the consents of both sides have to be taken, investigation for a proper transfer has to be made, and usefulness and life-saving have to be aimed without suggesting any benefit, for ethical considerations.³³

The 5th to 11th statements of the LAOTPPT Law Number: 2238 include determinations about obtaining organs and tissues from the living individuals, and from the deceased donors. According to these statements, obtaining organ and tissue is forbidden from a person below 18 years old, and from those who are not legally responsible. According to the 7th statement of the law; the physician has to give detailed information to donor, in a proper way about the risks, and medical, psychological, familial and social consequences of the organ or tissue removal, and about the benefits provided by organ or tissue donor to the recipient. Donor has to be informed about the benefit that would be provided to the recipient. If donor is married, it must be determined if his/her partner knows about the decision of donor, and the situation has to be confirmed by an official report; the physician is obliged not to report the names of donor and recipient, except for the existence of blood relations or affinity by marriage, or close personal relationships.^{8,17,32}

In the 11th statement, the conditions are defined for obtaining organ and tissue from a deceased donor. According to this, organs of a person

can not be obtained before the brain death exists; diagnosis of brain death has to be made with consensus, by a four-member council of physicians including one cardiologist, one neurologist, one neurologist or specialist in neurosurgery, and one specialist in anesthesiology and reanimation or in intensive care.⁷ This statement has been re-regulated in 2014 by the 41st statement of the law, number 6514, and has been modified as follows: “the existence of medical death is decided with the consensus of two physicians, and of these, one is neurologist or specialist in neurosurgery, and the other is specialist in anesthesiology and reanimation or in intensive care; decision has to be made proper with the evidence-based medical rule”.³⁶ In the 12th statement; the physician responsible for the treatment of recipient, and physicians responsible for the organ and tissue removal, preservation, grafting and transplantation are forbidden to be present in the council of physicians who will determine the medical death.^{1,7} Exclusion of the recipient’s physician, and the physicians responsible for transplantation from the council, ensures the donor. In other words, obtaining personal benefit by the ones being in charge with donor, and positive discrimination due to emotional bond are avoided.

Turkey has signed the Biomedicine agreement in 2003, and it has come into effect in 2004. However Turkey put reservation in the 20th statement, 2nd paragraph which is related with the protection of persons who are legally not responsible for confirming organ donation, due to the reason that it is not compatible with the 5th statement of the law about organ and tissue procurement, preservation and transplantation; the 2nd paragraph includes the following statements: “with the exception, and under legally protected conditions, by the regulation related with donation of regenerable tissues from a person who is legally not responsible (absence of a proper donor who is legally responsible; the recipient being the brother or sister of donor; donation existing as an expectation for life-saving regarding the recipient; the competence provided in the 2nd and 3rd paragraphs of the 6th statement has to be given lawfully, and by being confirmed

by the competent organization, and in a private and written way (In the case of a little who is not legally responsible to give permission for an intervention, the intervention can be made only by the permission of the little’s tutor, or the legally determined competent authority, individual or organization. The little’s opinion has to be taken into consideration as a determining factor, the importance of which increases proportionally with the age and degree of maturity); can be permitted if the possible donor does not make any rejection.^{34,35} It may be considered that the LAOTPPT Law Number 2238 and determinations in the Biomedicine Agreement do not completely overlap regarding the conditions of organ and tissue transplantation. With the Regulations of Organ and Tissue Transplantation Services which has come into effect in 2012, criteria of brain death have been made clear; the organ transplantation can be applied by informing the familiars of the person with brain death, and following their consent.³⁷ The criteria for brain death change in the countries that have signed the Biomedicine Agreement.

The content of the 14th statement of the LAOTPPT Law Number 2238 has been changed with the first statement of the law date 1982, number 2594, and it has come into effect in the current existing form. According to this; if a person exists with a severe damage in the body and his/her life ends as a result of an accident or natural disaster, and if the victim’s familiars mentioned above are not besides him, the intact tissues and organs can be transferred to the persons whose lives are dependent on the organ or tissue transplantation, with the obligation that the council of physicians determined in the 11th statement would report formally that medical death is not related with the organs that would be transplanted; in the cases existing with urgent medical obligation for transplantation, organ and tissue transplantation can be applied without requiring a permission or testament. In these situations, forensic autopsy is performed after these procedures; report of the council of physicians is recorded on the official report of forensic examination and autopsy, and is attached to the official paper.¹ A new regulation has been

made in this law, by the 42nd statement of the Law date 2014 and Law Number 6514, and it was changed as follows: "If a contrary testament is not indicated, tissues like cornea that would not cause a change in the deceased, can be removed".³⁷ There is not a problem in the use of unowned cadavers; however this is an important situation that has to be questioned from the ethical point of view. Absence of a familiar of the case who could be informed, or absence of opinion of the case related with this situation before his death, exist as the matters of problem regarding respect for autonomy. For example a person who left his environment following loss of cognitive functions, and who then died with the existence of brain death, may be accepted as an unowned person if no document is found on him for determining the identity. However some familiars of the unowned person may exist following organ removal, and informative explanations may lead to aversive reactions. Moreover, use of the unowned persons as cadavers due to their social status, leads to violation of the principle of justice. Considerations exist as the unowned persons are undefended and less valuable relative to the individuals who lost their lives with their familiars besides them, which is a situation of dilemma. For these reasons, donated cadaver gains importance in the organ transplantation.¹⁴

ORGAN DONATION

Organ donation is the willing permission during the life of a person, for using some or all of his organs in the treatment of others following his death. There are four methods or systems for organ donation. These methods or systems are taken into consideration when the person who makes donation is not ready for donation with his/her own willing. These legal regulations are valid within the countries, and they are therefore variable.³⁴

Rejection method; This is the method with the widest content. In this method, all persons who did not definitely reject in their lives, are accepted as the individuals who made organ donations (the same with the global permission system).

Method of widened rejection; After the death of donor, relatives of the potential donor accept that organ donation was a testament of the dead person that he agreed during his life.

Method of volunteering; It is the obligatory acceptance of donor during his life for the donation of his organs. It requires procedures for the acceptance for a definite organ donation. Therefore it has an extremely narrow content.

Method of widened volunteering; After the death of donor, his family may give consent for organ donation.

Global permission system; if there is not a contrary expression, all individuals are assumed to make organ donation, and after diagnosis of brain death, their organs are removed for being transferred. This system is valid in Scandinavian countries; in this system, information banks are formed, which include blood and other biological elements. Persons who give required materials to these information banks, are principally accepted to give permission.

It is not possible to mention that "global permission" or "rejection model" is compatible with the concepts of "right of living" and "body integrity", which are protected with the Constitutional Law.³⁴

The method of volunteering and the system based upon the open permission of donor, have the same meanings. If there is not an open permission of the person in his health, it is not possible to take his organs following death. When this system is applied definitely, only the permission of donor is taken into consideration; in less definitely applied conditions, permission of one of the mentioned relatives in order (partner, mother-father, siblings, etc), is considered to be sufficient for transplantation.³⁴

The last system for transplantation does not require the open permission of donor. Following the existence of medical death, organs of the person can be removed. The main reason why this system is not approved, is the avoidance of even a contrary expression; it does not respect autonomy, and it is completely a dogmatic approach.

In our country, it is possible to mention that a mixed system is applied for transplantation, which includes some of the principles of about all systems described above. Principally the permission (open consent) system is accepted in our country. In the 6th statement of the LAOTPPT Law Number 2238, permission for medical intervention for the removal of an organ, is determined as follows: "... for the removal of an organ from a person, a physician has to confirm the official report that was written and signed by the donor free of affect, and in an open and conscious state, in the existence of at least two witnesses, or has to confirm the official report signed by donor following verbal declaration in the existence of at least two witnesses".⁶ In this determination, it is stated that permission can be expressed in two different ways; permission can be mentioned "in the existence of at least two witnesses, and official report written and signed by donor and confirmed by the physician" or it may be declared "in the existence of at least two witnesses, by verbal declaration of donor, and the official report written by another person, signed by donor and confirmed by the physician".³⁴ The existence of witnesses are essential for the guarantee of volunteering. It means that there is not any force. The 1st subsection of the 14th statement of the same law is accepted as the definition of the permission (open consent) system. By a change in the LAOTPPT Law Number 2238 made in 1982, in the situations of "accidents an natural disasters", organ transfer is permitted "without the presence of testament and permission". This statement includes the system that does not require the open consent of the donor.

After the persons have made their decisions during life related with organ donation, they have to take their cards of organ donation which are a kind of testament, following the filling of organ donation bonds; these cards must always be kept with them.³ These individuals are also added to the donor list that covers all over the country. In the situation of brain death, this card helps the families to make an easier decision. The situations of relatives during making a decision in the case of unexpected deaths, sensitivities of the population, and ethical considerations must always kept in

mind. When the relatives of donor are informed about the situation beforehand, the procedures of transfer may speed up. After the death of person who made organ donation, the relatives become the owner of the deceased. For the relatives who have not privately spoken about this subject with the lost person, donation card or the existence of the name of donor in the general list may help the relatives to feel moral peace; this may in turn help them to make a decision, easier. In some cases, relatives of donor may reject organ donation because of their beliefs, even in the presence of a donation bond. In such situations, and regarding respect for authority, the relatives have to be informed about the consent of donation, which is a kind of testament. When the relatives are not convinced, they must not be forced. In such situations, legal regulations may be helpful, which are related with the maintenance of personal rights of deceased, or the right of possession regarding the deceased.

On the other hand, according to Büyükay, consideration of the third individuals as a decision maker about the permission, may be accepted as an open violation of the right of person to determine his own future. Although right of personality is actually accepted to end with death, one may demand the protection of his personality rights after death, and this also forms a part of the personality right.³⁴

Due to the increasing number of persons waiting for an organ which is parallel with the increasing population, organ transplantation has to be evaluated and considered in a more systematic way. The centers related with organ transplantation regulate advertising activities. People are given information about organ donation in certain days of the year (eg week of organ transplantation), and number of donors are tried to be increased.

When the number of cases in the table below are compared with regard to years, it is possible to consider that these activities have been helpful regarding organ transplantation (Table 1).¹⁶

The total number of organ transplantations in Turkey between the dates 2011 and november 15, 2015 are as follows: kidney 14.465, heart 375, liver

TABLE 1: Data of organ transplantation systems.

		2011	2014
Number of donors	Live	2831	3244
	Cadaver	333	407
TOTAL		3164	3651
Number of transplanted organs	Kidney	5769	6555
	Heart	376	425
	Liver	2539	1896
	Lungs	12	66
	Small intestine	1	7
	Heart valve	4	3
	Pancreas	75	32
	Cornea	990	4279
TOTAL		9766	13263

5398, lungs 121, small intestine 18, heart valve 9, pancreas 52, and cornea 11.190. The number of cases in Turkey waiting for an organ between January 1, 2015 and November 15, 2015, which are the latest data, are as follows: kidney 22.252, liver 2238, heart 625, lungs 51, and pancreas 266. Of the 70.000 patients with chronic kidney disease, 40.000 maintain their lives by undergoing hemodialysis. The number of patients with chronic kidney failure is expected to be about 115.000, in 2016.^{16,38}

CONCLUSION AND RECOMMENDATIONS

Organ transplantation differ from all other medical applications; it is private, extremely complicated, and as a background it includes giant organizations like providing and effectively delivering the organs. Besides its medical aspects, it is also an area with extremely wide social, legal and ethical considerations. The current insufficiency in providing the needed organ for transplantation limits applications, and need of organ to be transferred increasingly exceeds the obtained number of organs. The level of information of the population on this subject is low, and therefore especially the organs with vital importance like the heart, lungs and kidney, can not be obtained in time for the patients waiting, which result in death of these cases.

The legal regulations about organ transplantation in our country are substantially functional. Security of the patients and working team is

maintained by obeying these laws and regulations, with deontological regards. The holiness of life is considered as the most important and protected norm especially regarding the donor. Many diseases that are known to be fatal, can be treated currently by considerably expensive methods of treatment. These methods of treatment require high technology, and even rich countries experience difficulties in providing the expenses. Therefore it is important to make the best choice in all aspects, in choosing the most proper and useful method of treatment. For example do we have to operate the most severe patient existing with a high risk of not to benefit from treatment, or a less progressed case who is expected to have a much better outcome with transplantation. Therefore physicians have to discuss each case with regard to the considerations of being helpful, and using the limited supplies in a fair way, and the advantages and disadvantages have to be carefully evaluated.

The Bioethics Society is helpful in solving the ethical problems, and the followings have been mentioned in its report related with the ethical problems in organ transplantation: the human existence, honor and integrity, to be useful to the patient, not to harm, individual autonomy, informed consent, privacy, medical secret, respect to private life, organ delivery, justice, equality, and rightness. Ethic committees are the consultants on these affairs.

In organ transplantation, there exists conflict of principles and dilemmas about the end of life, from the ethical point of view. Is it wise and right to waste the vital and precious organs in a case who has no chance to live without aid, and who can maintain his life only by palliative care, though these organs could be an extremely proper choice for another patient?

In contrary, is the existence of the case that you have decided to end his life, unimportant? Are his contributions to life, and beliefs and opinions on this subject, unimportant?

Would evaluation of these cases only by considering the liver, kidney, etc by the permission of laws and legal tutor/successors, lead to some ethical and moral impairments?

When the life of a severe patient is at terminal, but his care is provided in an honorable way, what would be the duration of this care, and what would be the moral and material expenses of this care? Would the justice principle be harmed with the delivery of limited supplies? Aren't the transplanted organs also limited? Might the psychological press on individuals about organ donation, violate autonomy?

Because of the performance system, procedure of transplantation leads to high level of earnings regarding the hospital and working team, and the psychological press on the patients and their relatives by the hospital staff for increasing the number of transplantations, also has to be kept in mind. Within the existing system, the informed consents of persons have to be taken during their lives, for organ donation from the deceased. If the person does not want to give an open permission, the legal approach should be the "with the permission of any familiar who is besides him"; the limits of this statement is not clearly defined, and it also non-identifies the deceased.³⁴

All over the world and in our country, organ donation is extremely less than the need for transplantation; therefore advertising studies in the population have to be made, in order to increase the persons' information and consciousness on this subject, and to gain trust.

Countries try to find new means to widen donor pool, and also try to develop organizations to increase the number of cadaver donations. The Organ Transplantation Coordinators is one of these organizations, possessing important functions.⁴

The coordination system is currently valid for organ transplantation, and with this system, deci-

sions are made more quickly, and transplantation procedure speeds up. Besides living donors, transfers from cadavers have also been increasing seriously. In the case of transplantations from an unowned cadaver, the specialists in forensic medicine experience difficulties in making decisions because of professional and moral responsibilities; however they have to express their opinions by considering the principles of both justice and usefulness.

Living donor transplantation is performed with the principle of volunteering, in order to help another person, and to save life. Transplantation from a cadaver is supported with the aim to save another person's life, instead of decaying under the ground.

Aksoy Cohen recommended in 1985 to establish "organ markets", so that donors could take a definite amount of money; this recommendation was approved in his article, but he also stated the risk of abuse in such affairs including Money.³⁹

Maybe within several years, people would go to organ markets to purchase organs generated via stem-cells, and maybe these markets would take place in the health economy.

In conclusion; in order to obtain required organs in an honorable way, the number of national and international organ transplantation coordination centers has to be increased in legal limits and by considering ethical principles; the communication between these organizations has to be increased, so that transplantations of organ and tissue would be made easier and more quickly. The legal and material support by the government have to be provided to these coordination centers.

REFERENCES

1. Parlak Ş. [Organ donation and emerging issues in organ transplants]. *TBB Dergisi* 2009;83:189-216.
2. Özdağ N. [The view of the public towards organ transplantation and donation]. *C.Ü. Hemşirelik Yüksekokulu Dergisi* 2001;5(2):47-8.
3. Koçak Süren Ö. [Investigation from legal and ethical aspects of the organ and tissue transplantation]. *TBB Dergisi* 2007;73:174-95.
4. Keçecioglu NB. [Organ transplantation coordinator's]. *Turkiye Klinikleri J Gen Surg-Special Topics* 2013;6(1):173-7.
5. Elçioğlu Ö. [Organ transplantation and ethics]. *Çağdaş Tıp Etiği*. Öncel Ö, Aksoy Ş, Demirhan Erdemir A, editörler. 1. Baskı. İstanbul: Nobel Kitabevi; 2003. p.309-27.
6. Kiper H. [Organ transplantasyonu and ethics]. *Klinik Etik*. Demirhan Erdemir A, Oğuz Y, Elçioğlu Ö, Doğan H, editörler. 1. Baskı. İstanbul: Nobel Tıp Kitapevleri; 2001. p.514-29.
7. Watson CJE, Dark JH. Organ transplantation: historical perspective and current practice. *Br J Anaesth* 2012;108(Suppl 1): i29-i42.

8. Murray JE, Tilney NL, Wilson RE. Renal transplantation: a twenty-five year experience. *Ann Surg* 1976;184(5):565-73.
9. Terzioğlu A. [Ethical problems brought along with the organ transplantation]. *Türkiye Klinikleri J Med Ethics* 1993;1(1):35-52.
10. Anadol E, Tüzüner A. [History of transplantation]. *Türkiye Klinikleri J Surgery* 2001;6(1):1-3.
11. Eldegez CU, Seyhun Y. [History of transplantation in the World and Turkey]. *Türkiye Klinikleri J Gen Surg-Special Topics* 2013;6(1):1-6.
12. Langer RM, Cohen B, Rahmel A. History of eurotransplant. *Transplant Proc* 2012;4(7):2130-1.
13. Haberal M. [Transplantation: past, present and future]. *Türkiye Klinikleri J Med Sci* 1989;9(4):239-42.
14. Helvacı A, Meydan B, Akın O, Coşkun T, Kutlu CA, Taşçı E, et al. [A single lung transplantation for silicosis: the first successful lung transplantation case in Turkey]. *Turkish J Thorac Cardiovasc Surg* 2011;19(3):455-62.
15. Genç R. [Organ transplantation surgery in Turkey and in the world: The management of transplantation logistics]. *Ulusal Cerrahi Dergisi* 2009;25(1):40-4.
16. Yüccetin L. [Family interview, permission and support]. *Organ Nakli Koordinasyonu El Kitabı*. 3. Baskı. Antalya: Akdeniz Üniversitesi Organ Nakli Eğitim, Araştırma ve Uygulama Merkezi; 2001. p.83.
17. Resmi Gazete (27.10.2010, Sayı: 27742) sayılı İnsan Doku ve Hücreleri ile Bunlarla İlgili Merkezlerin Kalite ve Güvenliği Hakkında Yönetmelik; 2010. p.1.
18. Hakeri H. [Organ/tissue transplantation and legal problems]. *Sempozyum, Tıp, Etik, Din, Sosyoloji ve Etik Bağlamında Organ Nakli Sorunlar ve Çözüm Önerileri Sempozyum Kitabı*, 9 Mayıs 2014. İnönü Üniversitesi, Malatya: Pınarbaşı Matbaacılık; 2014. p. 62-71.
19. Bozoklar A. [Organ donation in Turkey: The perspective of transplant coordinators]. *Türkiye Klinikleri J Gen Surg-Special Topics* 2009;2(1):5-9.
20. Kemalolu B. [Organ donation and transplantation in Turkey]. *Organ Nakli Koordinatörleri Derneği Yayını* 2013;1:4-9.
21. Gündüz Ş. [Organ transplant at the out traditions of Islamic]. *Tıp, Etik, Din, Hukuk ve Sosyoloji Bağlamında Organ Nakli Sorunlar ve Çözüm Önerileri Sempozyum Kitabı*. İnönü Üniversitesi, Malatya: Pınarbaşı Matbaacılık; 2014. p.10.
22. Sert G. *Uluslararası Bildirgeler ve Tıp Etiği Çerçevesinde Hasta Hakları*. 1. Baskı. İstanbul: Babil Yayınları; 2004. p.246.
23. Akaydın M, Demirbaş A, Döşemeci L, Erdoğan O, Ersor FF, Gürkan A, et al. [Mediterranean University model to organ transplantation]. *Türk Nefroloji Derneği Yayınları* 2009;377-92.
24. Aasi GH, Erdem M. [Islamic Legal and ethical views on organ transplantation and donation]. *Journal of Islamic Law Studies* 2010;(15):265-78.
25. Kunin JD. The search for organs: halachic perspectives on altruistic giving and selling of organs. *J Med Ethics* 2005;31(5):269-72.
26. Markwell HJ, Brown BF. Bioethics for clinicians: 27. Catholic bioethics. *CMAJ* 2001;165(2):189-92.
27. Pearl AJ. "Get yourself a new heart": Judaism and the organ transplantation issue. *CMAJ* 1990;143(12):1365-9.
28. Siegel-Itzkovich J. Israel allows removal of sperm from dead men at wives' request. *BMJ* 2003;327(7425):1187.
29. Hutchinson JF, Sharp R. Karma, reincarnation, and medicine: Hindu perspectives on biomedical research. *Genomic Med* 2008;2(3-4):107-11.
30. Akıntürk T. *Hukuka Giriş*. Anadolu Üniversitesi Yayını No:1359. Açıköğretim Fakültesi Yayını No: 726. 6. Baskı. Eskişehir: Anadolu Üniversitesi Yayınları; 2002. p.159.
31. Yıldız KA. [Legal aspects of the tissue and organ transplantation]. *Hayata Bağış Dergisi* 2013;2:26-7.
32. Kılıçoğlu A. [Legal aspects of organ transplantation and tissue removal]. *Türkiye Barolar Birliği Dergisi* 1991;2:264.
33. Resmi Gazete (29.05.1979/16655), 2238 Sayılı Organ ve Doku Alınması, Saklanması ve Aktarım Hakkında Kanun. Sağlık Mevzuatı; s. 5153.
34. Büyükcay Y. [Search systems about the organ transplant]. "e-akademi" *Hukuk, Ekonomi ve Siyasal Bilimler Aylık İnternet Dergisi* 2012; 129.
35. Aydın ÇK. [The crime of tissue or organ trafficking]. *Ankara Barosu Dergisi* 2011;(1):129-62.
36. Hafizoğulları Z. [5237 Penalties and Security Measures in the Turkish Penal Code]. *Ankara Barosu Dergisi* 2007;65(1):78-109.
37. Resmi Gazete (02.01.2014/6514), 28886 Sayılı Sağlık Bakanlığı ve Bağlı Kuruluşlarının Teşkilat ve Görevleri Hakkında Kanun Hükmünde Kararname ile Bazı Kanunlarda Değişiklik Yapılmasına Dair Kanun; 2014. s.10.
38. Turkish Statistical Institute. *İstatistiklerle Türkiye*. Yayın No:4380. Ankara: Türkiye İstatistik Kurumu Matbaası; 2014. p.100.
39. Aksoy Ş. [A proposal to increase organ donation from cadavers]. *Türkiye Klinikleri J Med Ethics* 2003;11(3):189-94.