Legal Aspects of Transplantology in the Republic of Uzbekistan

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ABSTRACT

One of the most progressive and rapidly developing branches of medicine is transplantology, a science dealing with the problems of transplantation of organs and tissues. As a treatment method, transplantation is indicated for a large number of a wide variety of diseases. According to generalized data, modern world demand is at least one million clinical transplantations of the kidney, heart, liver, not counting other organs. This trend has a tendency to progress. In Uzbekistan, the history of transplantology began in 1972 with the organization of the Tashkent kidney transplant centre. Currently, the "Temporary provision on the procedure for closely related kidney transplantation and (or) liver share" is being maintained.

INTRODUCTION

Transplantology is a young and one of the most promising areas of medical science and practice: it accumulates the latest of modern surgery, anesthesiology, immunology, pharmacology and other life sciences and is based on a whole set of high medical technologies. Transplantation reaching the level of "physical" control of a person's death is not a highly specialized, private medical issue, but a serious socio-cultural problem [1, 5-9, 21]. For a short time since its inception, already in the middle of the twentieth century, clinical transplantology has achieved considerable success [3]. According to the IX World Congress of Transplantologists (1982), hundreds of hearts (723), thousands of kidneys (64000), etc. were transplanted. While transplant operations were counted by units and were experimental in nature, they caused surprise and even approval [11-13, 19].

In 1967, K. Bernard made the world's first heart transplant. Then, during 1968, another 101 similar operations were performed. These years were called in the press the time of "transplant euphoria". It was caused not only by the professional uniqueness of such operations. The expansion of the practice of transplantology is accompanied by increased ethical and legal tension around this type of medical activity [23, 26].

The founder of the experimental transplantation of vital organs, in particular the heart, was the Russian scientist Vladimir Petrovich Demikhov, who transplanted a donor heart to a dog in 1951. The first successful kidney transplant from a living donor was made in 1965 by Academician B.V. Petrovsky. The following year, he also carried out a successful kidney transplant from a corpse. Until the beginning of the 60s, transplantology remained, in fact, the field of experimental surgery, without attracting special attention from the public. In 1967, a surgeon from South Africa, Christian Barnard, having undergone a preliminary internship at Demikhov, for the first time in the world, successfully transplanted a heart to a human. His patient lived more than a year after surgery. The first surgeon in Russia, academician of the Russian Academy of Sciences V.I. Shumakov was the first to perform a heart transplant in Russia.

If transplantology began with a kidney transplant, today medical transplantologists are able to transplant almost all vital organs - after the kidneys, the heart, liver, lungs and pancreas. Previously, as a result of the rejection reaction, patients died after surgery in weeks, months, and this seemed

an insurmountable barrier to transplantology, but today, thanks to the efforts of physicians around the world, the rejection reaction has begun to recede [18]. There are more and more new drugs that neutralize the rejection reaction without major side effects. And this allows to transplant not only whole organs, but also individual tissues and islets of cells, in particular, cells from the pancreas of humans or animals that are transplanted with patients with diabetes mellitus [16]. According to WHO, on the basis of operational data that were analyzed for the period from 2008 and further on in 104 countries, which account for almost 90% of the total population, it was concluded that 100,800 whole organ transplants are performed annually: 69,400 kidney transplants (46% of donors in life), 20,200 liver transplants (14.6% of donors in life), 5,400 heart transplants, 3,400 lung transplants, and 2,400 pancreatic transplants. Although some data do not provide all of the data on transplant material from the deceased, information regarding approximately 22,400 deceased donors is also transmitted by the GODT. These countries account for most of all donation and transplantation programs: 10 countries of African region, 21 countries of the region of the Americas, 40 countries of European region, 12 countries of Eastern Mediterranean Region, 12 countries of Western Pacific Region and 9 countries of Southeast Asia Region [3, 4, 15].

In Uzbekistan, the Tashkent kidney transplant center was established in 1972. The center was created by the initiative of Academician U. A. Aripov, a pioneer in clinical transplantology, who conducted the first kidney transplant in Uzbekistan in 1972. The kidney transplant center has gone all the way, characteristic of transplantology as a whole. 1970 -1973 - the formation of the Center. At this time, a nephrological service with hemodialysis and an appropriate diagnostic base was created. A donation service to remove a kidney from a corpse was organized. The technical reequipment of the dialysis laboratory was performed with the implementation of 3 - 3.5 thousand hemodialysis procedures during the year. The number of kidney transplants has grown to 20 - 25 operations per year. A three-component immunosuppression scheme began to be used. Transplant survival has improved significantly. In 1994, in connection with the adoption of the law "The Criminal Code of the Republic of Uzbekistan", which permitted the removal of organs from a corpse only with the permission of relatives or the lifetime consent of the deceased, kidney transplantation in Uzbekistan ceased.

MATERIALS AND METHODS

In 2002, the Ministry of Health of the Republic of Uzbekistan issued an order to authorize a kidney transplant from a living related donor. At the end of 2006, the Ministry of Health revoked the order. Since 2007, the Surgery Center has not had kidney transplants. In 2010, kidney transplantation operations resumed. In total, up to 2007, the center performed 358 kidney transplant surgeries. In 311 cases, cadaveric kidney transplants were performed, 47 patients underwent a kidney transplant from a living related donor. Currently, the "Temporary provision on the procedure for closely related kidney transplantation and (or) liver share" is being maintained. The development of the draft law is provided for in paragraph 221 of the State Program for the Implementation of the Strategy of Action for the five priority areas for the development of the Republic of Uzbekistan in 2017-2021 in the "Year of dialogue with the people and human interests", approved by Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. PD-4947. The document is aimed at the legal regulation of transplantation of human organs and tissues, the development of transplantology as a clinical discipline and will create the legal basis for transplantation and human organs and tissues. With the adoption of the law in Uzbekistan, they will perform kidney and liver transplants from any donors, and in the near future they will begin to conduct heart transplant operations.

All these regulatory legal acts imply the humanistic orientation of modern technologies and are closely correlated with the norms of the World Health Organization, where transplantation is considered only as a means to save human life and health. At the same time, there are still many controversial issues, one of which is the question of whether only a dead person or a living one can be a donor. In most European countries, this issue is resolved positively in both the first and second cases, but under different conditions.

RESULTS AND DISCUSSION

The document on the "Temporary provision on the procedure for closely related kidney transplantation and (or) liver share" was adopted for the purpose of high-tech specialized medical care for patients with terminal stages of chronic kidney and liver diseases, as well as organization of closely related transplantation in the republic. The regulation determines the procedure for kidney transplantation and (or) the proportion of the liver from living closely related donors, indications and contraindications for performing closely related transplantation, and the rights and obligations of the donor and recipient.

The final decision on the need for transplantation is made by a special commission formed by the Ministry of Health. For the operation, it is necessary to obtain the full free and conscious consent of the donor, set out in writing, for the removal of one kidney and (or) lobe of the liver from it. In this case, the donor must undergo an external medical examination. After transplantation, the donor and recipient will be provided with preventive medical examination for at least three years. In addition, patients undergoing outpatient monitoring will be provided with drugs in the manner prescribed by law. Establishing a transplant service is of great importance. Indeed, now the patient will be under the supervision of doctors, even the smallest changes in his state of health will be under the supervision of specialists. This will prevent postoperative effects. It should be noted that at the

moment it is just starting to establish this unique service. In the future, its scope and capabilities will be expanded. To this end, scientific, technical and legal conditions have been created in the countries. The temporary position of the Cabinet of Ministers will be valid until the entry into force of the Law of the Republic of Uzbekistan "On transplantation of organs, tissues and (or) human cells".

There are a number of moral issues in obtaining organs from living donors. The ethical issues of transplantology differ significantly depending on whether it is a question of organ harvesting for transplantation in a living person or from a dead person's body. Kidney transplantation from living donors was the first direction of transplantology, which found its place in practical medicine. Currently, this is a rapidly developing worldwide direction for the provision of medical care to patients with irreversibly impaired renal activity. A kidney transplant not only saved hundreds of thousands of patients from death, but also provided them with a high quality of life. In addition to the kidney, a portion of the liver, bone marrow, etc., are transplanted from living donors, which in many cases is also a life-saving treatment method. However, this raises a number of difficult moral problems.

Organ transplantation from a living donor carries a serious risk for the latter. Firstly, this is the risk associated with the surgical operation itself, which for any patient is always a significant psychophysiological trauma. The literature describes cases of serious complications during and after the removal of a kidney from a donor (and even deaths). Secondly, having lost one of the paired organs or part of an unpaired organ, the donor becomes more vulnerable to adverse external influences, which is fraught with the development of various forms of pathology. Obtaining an organ or part of it from a donor is obviously a retreat in relation to the donor from one of the fundamental ethical principles of medicine - "do no harm"

To alleviate this problem, it is probably necessary to consider the possibility of strengthening the protection of the interests of the donor through medical insurance. It should also be borne in mind that the voluntary and genetic relationship of the donor and the recipient do not exclude the possibility of a conflict between them. Therefore, there is nothing wrong with the fact that a voluntary sacrifice to another human will be legalized with an appropriate distribution of responsibility and obligations of the parties. From an ethical point of view, the circumstance justifying the violation of the "do no harm" principle is the recognized right of a potential donor to sacrifice one of the organs or part of an organ from the feelings of compassion, love for one's neighbor and altruism. However, not every sacrifice can be made if it is a priori known that it will cause irreversible damage to the health of the donor.

From an ethical point of view, donation should be a voluntary, consciously committed and disinterested (altruistic) victim. Consider the conditions under which these principles are satisfied. Volunteering is possible in the absence of coercion to donation, based on clan, administrative, financial or other dependence (direct or through third parties).

Altruism involves the exclusion of a commercial transaction, that is, a sale, in the relationship between the donor and the recipient. The victim's awareness should be based on the completeness of the information provided by the doctor about the possible risk in relation to the health status and social wellbeing (working capacity) of the potential donor, as well as on the chances of success for the prospective recipient.

Currently, in all countries of the world, the practice of organ and tissue transplantation from a living donor is accepted only to people who are closely related to the donor, designed to ensure the principles of voluntariness and altruism. Today, however, the possibility of allowing such transplants to non-relatives is being discussed, but under the supervision of authorized independent bodies. In this regard, it should be noted that the resolution of such forms of donation poses a serious threat to its commercialization, even extortion of organs and tissues, a danger that will be very, very difficult to cope with.

But even with closely related transplants, moral problems can arise. So, when transplanting organs and tissues, the rule of informed consent is especially important. The financial interest, as well as the scientific interest associated with testing new surgical techniques, performing anesthesia, intensive care and drug treatment, may be the reasons for a possible interest in manipulating information in favor of a penchant for donation. In both cases, there is a previously noted danger that doctors, knowingly or unconsciously, will only provide a potential donor with favorable information, being silent, for example, about failures that result in fatal or disabling outcomes, low chances of success for the recipient, and alternatives for the recipient treatment methods. The probabilistic nature of medical predictions of the effectiveness of a particular treatment method objectively creates opportunities for the influence of the subjective interests of the parties involved in assessing their preference. The oral nature of the information excludes an objective assessment by specialists disinterested in transplantation and control from subjective distortions. Similar problems occur when receiving the consent of the recipient. Many moral difficulties can be resolved by discussing them at meetings of "ethical committees". Another issue that may arise when obtaining consent for a donation is the danger as to whether voluntariness is actually ensured. In domestic healthcare, medical information about patients is traditionally passed on to family members. Therefore, there is the likelihood of outright family pressure and even coercion against a potential donor. Such coercion may also have the character of an indirect, veiled psychological or moral impact. Particular attention should be paid to patients belonging to ethnic groups in which women are traditionally considered to have less social value than men, so that they are more dependent, therefore, more unfree and more prone to coercion by relatives. In this regard, the practice of those transplant centers can be considered justified in which any medical information about a potential donor (or recipient) is transmitted even to relatives only with his direct consent. In other words, confidentiality is ensured.

Another group of difficult moral problems arises in connection with the ban on the sale of organs for transplantation. The trend towards commercialization has its objective reasons. Firstly, there is a shortage of organs for transplantation, forcing patients to search for extraordinary sources of donor organs. Secondly, the search for earnings can push people to sell their own organs.

To avoid such negative consequences, the society is obliged to either go through the legalization of organ trade from living donors (which is hardly acceptable), or develop a set of measures that can effectively control the ban on commercialization, ease the pressure of objective factors by improving funding for transplant programs, creating a

national systems of procurement and distribution of cadaveric organs for transplantation, as well as strengthen the mechanisms of social protection of the population. As a "third" way, some authors propose replacing the organ purchase and sale mechanism with a mechanism of material compensation for organ donation.

CONCLUSION

Summing up, we note that transplantology is an area of life that cannot be abandoned, therefore it is necessary to develop and implement humanistic principles on the basis of which it will be regulated. Among the reasons that contribute to illegal transplantology include: low living standards, which may make individuals think about selling their organs; inadequate government funding for transplant programs; transplant deficiency and the spread of "transplant tourism"; a limited number of medical transplant centers and the desire of people at any cost to make surgery faster; the presence of a large number of people at risk of illegal organ harvesting. To eliminate the shortcomings it is necessary: to amend the existing legislation, penalizing the illegal acquisition, storage and transportation of organs.

We also note that Uzbekistan is gradually undergoing an evolution in the field of transplantology. In recent years, a lot has been done for the development of donation and transplantation of organs and tissues, the necessary regulatory proposals have been proposed and introduced and acts have been created, the material and technical base has been equipped, and much more. And the work continues. The temporary position of the Cabinet of Ministers will be valid until the entry into force of the Law of the Republic of Uzbekistan "On transplantation of organs, tissues and (or) human cells".

REFERENCES

- Mohan AJ, Gupta S, Tandon R. A comparative study of knowledge and attitude regarding tissues and organ donation, between general population and relatives of transplant patients. Current Medicine Research and Practice [Internet]. Elsevier BV; 2018 Sep;8(5):159–64. Available from: http://dx.doi.org/10.1016/j.cmrp.2018.09.003
- Rydzewska M, Drobek NA, Małyszko ME, Zajkowska A, Guzik-Makaruk EM, Pływaczewski EW, et al. Future Lawyers Support Organ Donation and Transplantation.
 Transplantation Proceedings [Internet]. Elsevier BV; 2018 Sep;50(7):1946–52. Available from: http://dx.doi.org/10.1016/j.transproceed.2018.03.131
- 3. Janahi FK, Al Rais A, Al Rukhaimi M, Khamis AH, Hickey D. Public Awareness of Knowledge, Belief, and Attitude Regarding Organ Donation and Organ Transplantation: A National Survey From the United Arab Emirates. Transplantation Proceedings [Internet]. Elsevier BV; 2018 Dec;50(10):2932–8. Available from: http://dx.doi.org/10.1016/j.transproceed.2018.08.006
- Cordner S, McKelvie H. Organ and Tissue Transplantation: Ethical and Practical Issues. Encyclopedia of Forensic and Legal Medicine [Internet]. Elsevier; 2016;624–31. Available from: http://dx.doi.org/10.1016/b978-0-12-800034-2.00306-2
- Consolo HK, Wigmore SJ. Ethical and legal issues associated with organ donation and transplantation. Surgery (Oxford) [Internet]. Elsevier BV; 2017 Jul;35(7):341–5. Available from: http://dx.doi.org/10.1016/j.mpsur.2017.04.008

- Ekser B, Cooper DKC, Tector AJ. The need for xenotransplantation as a source of organs and cells for clinical transplantation. International Journal of Surgery [Internet]. Elsevier BV; 2015 Nov;23:199–204. Available from: http://dx.doi.org/10.1016/j.ijsu.2015.06.066
- De Moraes EL, dos Santos MJ, de Barros e Silva LB, de Lima Pilan LAS, de Lima EAA, de Santana AC, et al. Family Interview to Enable Donation of Organs for Transplantation: Evidence-based Practice. Transplantation Proceedings [Internet]. Elsevier BV; 2018 Apr;50(3):705–10. Available from: http://dx.doi.org/10.1016/j.transproceed.2018.02.056
- 8. Caruso V, Daniele P. A network model for minimizing the total organ transplant costs. European Journal of Operational Research [Internet]. Elsevier BV; 2018 Apr;266(2):652–62. Available from: http://dx.doi.org/10.1016/j.ejor.2017.09.040
- Al-Khafaji AB, Parker LS. Ethics of Organ Transplants. International Encyclopedia of Public Health [Internet]. Elsevier; 2017;17–22. Available from: http://dx.doi.org/10.1016/b978-0-12-803678-5.00146-6
- 10. Bilgel F. The effectiveness of transplant legislation, procedures and management: Cross-country evidence. Health Policy [Internet]. Elsevier BV; 2013 May;110(2-3):229–42. Available from: http://dx.doi.org/10.1016/j.healthpol.2012.12.014
- Nagle SJ, Reshef R, Tsai DE. Posttransplant Lymphoproliferative Disorder in Solid Organ and Hematopoietic Stem Cell Transplantation. Clinics in Chest Medicine [Internet]. Elsevier BV; 2017 Dec;38(4):771–83. Available from: http://dx.doi.org/10.1016/j.ccm.2017.08.001
- 12. De Vries RJ, Yarmush M, Uygun K. Systems engineering the organ preservation process for transplantation. Current Opinion in Biotechnology [Internet]. Elsevier BV; 2019 Aug;58:192–201. Available from: http://dx.doi.org/10.1016/j.copbio.2019.05.015
- Toledo JS, Ribeiro EFK, Correia MM, de Souza PCM, Coutinho RR, Torres DFM. Knowledge Among University Students in Rio de Janeiro Regarding Transplant Organ Donation. Transplantation Proceedings [Internet]. Elsevier BV; 2018 Dec;50(10):2946–9. Available from: http://dx.doi.org/10.1016/j.transproceed.2018.08.039
- Hayes J, Nellore A. Management of Strongyloides in Solid Organ Transplant Recipients. Infectious Disease Clinics of North America [Internet]. Elsevier BV; 2018 Sep;32(3):749– 63. Available from: http://dx.doi.org/10.1016/j.idc.2018.04.012
- Fitch Z, Schmitz R, Kwun J, Hering B, Madsen J, Knechtle SJ.
 Transplant research in nonhuman primates to evaluate clinically relevant immune strategies in organ transplantation.
 Transplantation Reviews [Internet]. Elsevier BV; 2019 Jul;33(3):115–29.
 Available from: http://dx.doi.org/10.1016/i.trre.2019.03.002
- Braza MS, van Leent MMT, Lameijer M, Sanchez-Gaytan BL, Arts RJW, Pérez-Medina C, et al. Inhibiting Inflammation with Myeloid Cell-Specific Nanobiologics Promotes Organ Transplant Acceptance. Immunity [Internet]. Elsevier BV; 2018 Nov;49(5):819–828.e6. Available from: http://dx.doi.org/10.1016/j.immuni.2018.09.008
- Madisetty J, Wang C. Transfusion Medicine and Coagulation Management in Organ Transplantation. Anesthesiology Clinics [Internet]. Elsevier BV; 2017 Sep;35(3):407–20. Available from: http://dx.doi.org/10.1016/j.anclin.2017.04.004

- 18. Li S, Wang S, Murugan R, Al-Khafaji A, Lebovitz DJ, Souter M, et al. Donor biomarkers as predictors of organ use and recipient survival after neurologically deceased donor organ transplantation. Journal of Critical Care [Internet]. Elsevier BV; 2018 Dec;48:42–7. Available from: http://dx.doi.org/10.1016/j.jcrc.2018.08.013
- 19. Singh E, Schecter M, Towe C, Rizwan R, Roosevelt B, Tweddell J, et al. Sequence of refusals for donor quality, organ utilization, and survival after lung transplantation. The Journal of Heart and Lung Transplantation [Internet]. Elsevier BV; 2019 Jan;38(1):35–42. Available from: http://dx.doi.org/10.1016/j.healun.2018.08.009
- Bartoletti M, Giannella M, Tedeschi S, Viale P. Multidrug-Resistant Bacterial Infections in Solid Organ Transplant Candidates and Recipients. Infectious Disease Clinics of North America [Internet]. Elsevier BV; 2018 Sep;32(3):551–80. Available from: http://dx.doi.org/10.1016/j.idc.2018.04.004
- 21. Fischer SA. Is This Organ Donor Safe? Infectious Disease Clinics of North America [Internet]. Elsevier BV; 2018 Sep;32(3):495–506. Available from: http://dx.doi.org/10.1016/j.idc.2018.04.001
- 22. Cypel M, Yeung JC, Donahoe L, Chen M, Zamel R, Hoetzenecker K, et al. Normothermic ex vivo lung perfusion: Does the indication impact organ utilization and patient outcomes after transplantation? The Journal of Thoracic and Cardiovascular Surgery [Internet]. Elsevier BV; 2019 Sep; Available from: http://dx.doi.org/10.1016/j.jtcvs.2019.06.123
- 23. Oriol I, Sabé N, Tebé C, Veroux M, Boin IFSF, Carratalà J. Clinical impact of culture-positive preservation fluid on solid organ transplantation: A systematic review and meta-analysis. Transplantation Reviews [Internet]. Elsevier BV; 2018 Apr;32(2):85–91. Available from: http://dx.doi.org/10.1016/j.trre.2017.11.003
- Szpotanska-Sikorska M, Mazanowska N, Staruch M, Wielgos M, Pietrzak B. The observational study of selected sexual behaviour issues in female organ transplant recipients. Sexual & Reproductive Healthcare [Internet]. Elsevier BV; 2017 Jun;12:47–50. Available from: http://dx.doi.org/10.1016/j.srhc.2017.02.005
- 25. Gruessner RWG, Gruessner AC. Solid-organ Transplants From Living Donors: Cumulative United States Experience on 140,156 Living Donor Transplants Over 28 Years. Transplantation Proceedings [Internet]. Elsevier BV; 2018 Dec;50(10):3025–35. Available from: http://dx.doi.org/10.1016/j.transproceed.2018.07.024
- 26. Kalil AC, Sandkovsky U, Florescu DF. Severe infections in critically ill solid organ transplant recipients. Clinical Microbiology and Infection [Internet]. Elsevier BV; 2018 Dec;24(12):1257–63. Available from: http://dx.doi.org/10.1016/j.cmi.2018.04.022
- 27. Garrett GL, Yuan JT, Shin TM, Arron ST, Garrett GL, Colegio O, et al. Validity of skin cancer malignancy reporting to the Organ Procurement Transplant Network: A cohort study. Journal of the American Academy of Dermatology [Internet]. Elsevier BV; 2018 Feb;78(2):264–9. Available from: http://dx.doi.org/10.1016/j.jaad.2017.09.003