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GLOBAL ORGAN SHORTAGE: AN ANALYSIS OF NATIONAL SELF-SUFFICIENCY STRATEGIES

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From the standpoint of socio-humanitarian knowledge, the paper analyzes the problem of global organ shortage. The basic ideas of the international medical community about organ shortage and the main proposals for overcoming it are considered. Special emphasis is placed on the three most revealing national self-sufficiency strategies adopted by donor agencies – American, Spanish and Iranian strategies. The issue of influence of cultural differences and socio-economic inequality on established organ donation practices is discussed using Mexico, Turkey, Pakistan and Bangladesh as examples.

Keywords: organ shortage, WHO, national self-sufficiency strategies, USA, Spain, Iran, Mexico, Turkey, Pakistan, Bangladesh.

INTRODUCTION

Advances in transplant medicine as a result of better surgical techniques, postoperative rehabilitation and use of effective immunosuppressive drugs have made organ transplantation a routine medical practice in clinical settings around the globe. As a result, since the 1990s, organ donor shortage has been the main problem preventing efficient provision of transplant medical care for patients in need of it. This phenomenon is not specific to a particular country but a global challenge. Global organ shortage requires special study, as does organ shortage within a specific national jurisdiction.

The following issues are to be discussed under this paper:

– What is organ shortage from the perspective of the international medical community?
– What organ shortage management strategies are currently being proposed?
– How are cultural differences and socioeconomic inequalities affecting organ self-sufficiency practices?

WHO ON ORGAN SHORTAGE

From the moment organ transplantation became a successful means of saving lives, the international medical community, represented by the World Health Organization (WHO), began to pay a closer attention to various issues related to transplantation practices and donation. In 1987, the 40th World Health Assembly decided to develop the "Guiding Principles for Human Organ Transplants", which would highlight the progress achieved in human organ transplants and affirm that trade for profit in human organs among living human beings is inconsistent with the most basic human values and contravenes the Universal Declaration of Human Rights and the spirit of the WHO Constitution [1].

In 1991, WHO adopted the "Guidelines on Human Organ Transplantation" [2], which noted a shortage of donor organs and stated that "supply has never satisfied demand". Major focus was placed on the issue of organ trafficking from unrelated donors and special concern was also expressed on the fate of various vulnerable groups who became victims of trafficking. In order to stop this trade, the following principles were put forward: (1) organs should preferably be obtained from the deceased, (2) living donors should generally be genetically related to recipients, (3) no payment should be given or received for organs [3].

Subsequently, WHO repeatedly returned to the issue of organ shortage, invariably linking it with the problems of commercial organ trafficking, which was considered a serious obstacle to the normal development of transplantation worldwide. So, in 2004, the 57th World Health Assembly, taking into account already gained experience and new trends in transplantation practice, recommended revising the 1991 "Guidelines". Special emphasis was placed not only on organ trafficking, but also on transplant tourism. Speaking of "the growing insufficiency of available human material for transplantation", WHO also recognized that "transplantation encompasses not only medical but also legal and ethical aspects, and involves economic and psychological issues" [4].

In March 2007, the second Global Consultation on Transplantation took place in Geneva. During the event,

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WHO presented the stakeholders with a blueprint for updating the Guidelines. The stakeholders agreed to the creation of a Global Forum on Transplantation to be spearheaded by WHO, to assist and support developing countries initiating transplantation programs and to work towards a unified global coding system for cells, tissues and organs. During the Geneva consultation, it was noted that in 2005, 66,000 kidneys were transplanted in the world, but this represented a mere 10% of the estimated need. In addition, it was reported that "transplant tourism" makes up an estimated 10% of global transplantation practices. WHO experts emphasized that "quality, safety, efficacy and transparency" are essential if society is to reap the benefits transplantation can offer as a therapy" [5].

Many of the ideas voiced during the Global Consultation in 2007 were presented as part of the 2008 Declaration of Istanbul on organ trafficking and transplant tourism. Several important approaches to the issue under consideration were expressed in the declaration. "All countries need a legal and professional framework to govern organ donation and transplantation activities, as well as a transparent regulatory oversight system that ensures donor and recipient safety and the enforcement of standards and prohibitions on unethical practices." "Each country should strive both to ensure that programs to prevent organ failure are implemented and to provide organs to meet the transplant needs of its residents from donors within its own population or through regional cooperation." The authors of the declaration called on all participants in international communication to expand the "therapeutic potential of deceased organ donation," "minimize the burden on living donors," eliminate "barriers, misconceptions, and mistrust that currently impede the development of sufficient deceased donor transplantation," and improve the health infrastructure. Within the framework of the declaration, six principles were formulated, one of which stated: "Jurisdictions, countries, and regions should strive to achieve self-sufficiency in organ donation by providing a sufficient number of organs for residents in need from within the country or through regional cooperation" [6].

In 2010, the 63rd World Health Assembly approved the new "Guidelines", in which the "Declaration of Istanbul" idea was implemented. Particular attention was again paid to the challenges of transplant tourism and organ trafficking, which was closely associated with human trafficking. Eleven principles proposed to the world community emphasized the following: any consent required by law should be obtained before cells, tissues or organs (CTOs) may be removed from the bodies of deceased persons for the purpose of transplantation; physicians determining the death of a potential donor should be different from those directly involved in CTOs removal from the donor or subsequent transplantation procedures; donation from deceased persons should be prioritized over donation from living donors, and living donors should be genetically, legally or emotionally related to their recipients; no CTOs should be removed from the body of a living minor for the purpose of transplantation other than narrow exceptions allowed under national law; CTOs should only be donated freely, without any monetary payment or other reward of monetary value; high-quality, safe and efficacious procedures are essential for donors and recipients alike; the organization and execution of donation and transplantation activities, as well as their clinical results, must be transparent and open to scrutiny, while ensuring that the personal anonymity and privacy of donors and recipients are always protected [7].

In view of the Declaration of Istanbul, and the 63rd World Health Assembly Resolution, leading WHO experts soon published a special text urging governments of all countries to seek tighter control in achieving self-sufficiency in organ donation and transplantation. The authors of the publication specifically emphasized that "a new paradigm of national self-sufficiency is needed" and reiterated that "each country or region should strive to provide a sufficient number of organs from within its own population, guided by WHO ethics principles." The published material also contained a variety of information about the situation with the self-sufficiency of donor agencies in various countries of the world [8].

In general, during the late 1980s and early 2010s, WHO always adhered to a line of behavior that was aimed at addressing the problem of global organ shortage. In the course of this, it gradually came to the realization that many phenomena were hindering the fight against organ shortage – inconsistencies in national legislation on donation and transplantation, dishonesty among some members of the global transplant community, organ trading and transplant tourism. Almost from the very beginning, it was also recognized that there were major differences between developed and developing countries on how to organize effective and fair donation systems. Contradictions regarding the acceptability of the use of deceased or living donors and their attitude to organ sale were also revealed. Recognizing these differences and contradictions, leading WHO experts, however, are increasingly asserting that overcoming organ shortages should be a common goal for all participants in international communication, and the means for this should be on working towards self-sufficiency in donor organs within each country or region.

NATIONAL SELF-SUFFICIENCY STRATEGIES

Unavoidable organ shortage not only remains a constant headache for the international medical community, but also a starting point for developing various strategies to address it. The national organ self-sufficiency concept proposed by WHO is a framework, but each country

or group of countries may have its own approaches to practical implementation. Below we will consider some of the best-known self-sufficiency strategies for organ donation.

U.S. strategy

Along with the Soviet Union, the United States was one of the pioneers in the field of organ transplantation. One of the world's first successful organ donation systems was created there, which made it possible to harvest organs on a national scale and quickly redistribute them among medical institutions. In 1968, first organization, professionally engaged in organ donation – the New England Organ Bank (NEOB) – was established. It employed special specialists involved in identifying donors in hospitals located in the region, managing them after brain death diagnosis, obtaining consent to organ harvesting from the donor's relatives and providing psychological support to theь, receiving and transporting organs, monitoring the quality of work performed, organizing public information campaigns, media contacts, etc. Following NEOB, 57 more organ procurement organizations (OPOs) appeared [9, 10].

An important step was taken in 1984 when the US Congress approved the National Organ Transplant Act, after which the U.S. Department of Health and Human Services established the Task Force on Organ Procurement and Transplantation, comprising of specially appointed group of 25 specialists, to streamline the work of all regional OPOs. This led to the establishment of the national organ-sharing and procurement system through the Organ Procurement and Transplantation Network (OPTN), all of whose links were connected into a single computerized network. From 1986, this network and the entire OPTN started to be administered by non-profit, scientific and educational organization – the United Network for Organ Sharing (UNOS), overseen by the U.S. Department of Health and Human Services. The institutional members of UNOS include all US transplant centers and OPOs, managed through the Board of Directors and ad hoc committees [11, 12].

Along with national organizations OPTN and UNOS in the United States, regional associations started emerging in those same years, which included transplant centers, organ harvesting centers, local businesses and state medical administrations. They were focused on receiving and distributing organs to a higher level, to achieve material interest from the medical institutions involved in it, and also to optimize selection of candidates for organs, especially such scarce organs as transrenal organs. The best known of these regional associations was the Ohio Solid Organ Transplantation Consortium (OSOTC) created in Ohio in 1984 [13].

Due to the increasing number of medical solutions for transplantation treatment and the increasing demand for donor organs, the US national organ donation system became overloaded with work as early as the early 1990s, and this required subsequent adaptation to new challenges. Having started the struggle to increase the sources of donor organs, US specialists along with brain-dead donors began to more actively use "donors with advanced criteria", "marginal donors", "donors with heart failure", and also began to more widely attract various categories of intravital donors. In the 2000s, the professional language of US transplant doctors included such concepts as "living unrelated donors", "living donors legally and emotionally related to recipients", "directed and nondirected living donors", "good Samaritan donors" [14, 15].

The desire to use the full range of opportunities for obtaining new organs makes the U.S. self-sufficiency strategy one of the most aggressive in the world. It is noteworthy that the term "aggressive organ harvesting", which began to be promoted in scientific literature in the mid-2000s, is intended to refer to the tactics of "aggressive manipulation (management) of the donor's body in order to obtain maximum number of organs for transplantation". [16]. However, this notion seems to be true not only for characterizing specific medical situations, but also for the general trend in the US transplant medicine: to make the most of existing opportunities and create new ones.

Spanish strategy

Since 1990, Spain has had the most successful experience in organ self-sufficiency, with the establishment of the National Transplant Organization (*Organización Nacional de Trasplantes*) in 1989 under the leadership of nephrologist Rafael Matesanz, who led all organ donation activities based on a new model for obtaining donor organs – transplant coordination. For the first time in the world, Spain established a practice where identification and management of potential donors was entrusted on special specialists (transplant coordinators), whose activities were strictly accountable and paid for. Appointed from among hospital physicians, primarily from the intensive care units (ICUs), the transplant coordinators were able to ensure effective interaction between attending physicians and transplant teams, whereas in previous decades this was not possible. The whole chain of transplant coordination, from hospital to regional and national level, was built, and all technical and logistical aspects of quick access to donors and donor bodies were well-thought-out. While recognizing the importance of living donation, Spanish experts nevertheless focused on improving deceased organ donation. Within a few years the country came out on top in the world by these indicators. Consequently, WHO recognized the experience of Rafael Matesanz and his colleagues as exemplary and recommended it to other countries.

In addition to working to improve the situation with organ donation in their country, Spanish experts have also been actively involved in international expert analysis and advocacy on organ donation issues. With the participation of the Spanish National Organization, various pan-European and international documents on organ donation, such as guidelines, statistical information, declarations and directives, have been published. Thanks to persistent efforts by R. Matesanz, an article, for the first time in the world, was introduced into Spanish criminal law prohibiting trafficking in organs and severely punishing those who buy organs abroad. Calling transplant tourism a criminal and immoral activity, R. Matesanz pointed out that the activities are facilitated by doctors themselves, primarily in developed countries – the United States, Japan, Israel and Europe, supporting their patients who go in search of organs [17].

Spain's national self-sufficiency strategy, which actively promotes the idea of deceased organ donation to the public through the media, church and educational institutions, is nevertheless inferior to the U.S. strategy in terms of aggressiveness. For example, Spanish transplant doctors are almost twice less likely than their US counterparts to use the living donation potential and almost never use the living unrelated donation potential (in 2017 only 14 kidney transplants from unrelated donors were performed, which amounted to 0.3 cases per million people, while in the United States, 1124 such operations were performed, or 3.5 cases per million) [18]. Nevertheless, the idea of "aggressive organ harvesting" also finds support among Spanish specialists. An example of this is the proposal by Diego Gracia, Spain's most respected medical philosopher and bioethicist, to move from voluntary altruistic donation to compulsory civil obligation to transfer their organs after death. In his opinion, "organs of dead people are public goods", and therefore they should be disposed of not by an autonomous individual, but by the so-called "super-user" (supererogatory) – the whole society or the state. D. Gracia calls this approach a "radical solution" to the problem of organ shortage, but stresses that there are no legal grounds for this yet [19].

Iranian strategy

Another self-sufficiency strategy is related to the legalization of payment for organ donations. Officially, it is implemented only in one country, Iran, where it was introduced in 1988 immediately after the end of the Iran-Iraq war and under international political isolation. The role of the authoritarian theocratic regime in adopting this model of donor system in this Islamic state is not quite clear, but it is possible that the choice to legalize organ trade was a kind of reaction to the values of Western liberal democracy rejected by Iran and everything associated with it. Be that as it may, legalization of the sale of organs played a crucial role in the development of the national transplant program. The state became the buyer of all donor organs in Iran, thereby eliminating a number of moral, ethical and legal issues. The majority of Iranian specialists see this model as absolutely valid and fair [20, 21], although neither WHO nor most Western experts consider it as such.

The adoption of the paid model for acquisition of donor organs (kidneys) allowed Iran to get rid of long queues on waiting lists in just ten years. Thanks to this, the country was also able to put an end to illegal organ trafficking. With the introduction of a fee-based system, renal donors began to receive $3,500 for a sold organ (in the late 1990s), although the price later declined – $1,265 in 2002 and $900 in 2011. Besides, the Government provided free health insurance to donors. By supporting organ trade, the Iranian State had achieved a significant reduction in funds for high-tech medical care: the cost of maintaining patients at dialysis centers had been reduced. Both Western and Iranian specialists pay attention to the reasons why Iranians sell their organs. It is believed that these reasons are mixed – both financial and altruistic. However, organ sales are not just a matter for poor people. According to various estimates, the percentage of completely illiterate people selling their organs ranges from 2.7% to 29%, while the number of people with school education (6–12 years) ranges from 71% to 90.8%. In 2000, Iran passed a law allowing the use of organs from brain-dead patients. By the early 2010s, the number of kidneys received from such donors was 12%. Nevertheless, living unrelated donors continued to be the main source of organs in Iran in the early 2010s [22–25].

When comparing Iran's self-sufficiency strategy with that of the United States and Spain, it is easy to see that it clearly focuses on harnessing the potential of living unrelated donors. However, we have no reason to talk about the ideology of "aggressive organ harvesting" that is embedded in it. Unlike their US and Spanish counterparts, Iranian transplant doctors obviously do not take advantage of the full range of existing living donor opportunities. It seems that their choice is predetermined by the prevailing cultural norms of Islamic society, where a majority of the population is wary of the practice of removal of organs from deceased persons.

The three examples above do not exhaust the diversity of national self-sufficiency strategies that exist today, but they can be considered very indicative. Due to the role played in the world by US transplant medicine, the US "aggressive organ harvesting" strategy is in many ways a model for other countries, although it is not recognized as such by WHO. The desire to use the full range of existing opportunities to attract donor resources is the norm guiding the medical community in most developed countries. Spain's self-sufficiency strategy, recognized by WHO as an exemplary model, also has many supporters, apparently because it is less aggressi-

ve. The Iranian strategy, on the other hand, is officially unparalleled outside the country. However, sustained interest in it and abundance of publications on the role of the Iranian experience seems to have prepared this strategy for the future.

CULTURAL DIVERSITY AND SOCIAL INEQUALITIES

The international medical community, via WHO, attributes the possibility of developing transplantations and reducing the shortage of donor organs mostly to increased deceased organ donation. However, WHO experts rightly point out that in some parts of the world, the very idea of deceased donation triggers "cultural resistance". The countries in question are primarily those in Asia, Latin America and Africa, i.e. mainly developing countries. Recognizing this, WHO insists on the importance of fostering "qualitative research to understand the 'non-medical' reasons for this reluctance" [26, 27].

Mexico

Among developing countries in Latin America, Mexico is the most obvious example of the impact of culture on donor practices. This Catholic-dominated country is also governed by a government that has tried for decades to implement a modernization policy but is hopelessly lagging behind its northern neighbor, the US. Transplantation medicine is rather highly developed in the country. In 2017, Mexico was ranked fourth among all Latin American countries in terms of total number of kidney transplantations – 24.5 transplantations per million population. Meanwhile, the most frequent transplants are from living donors. Cadaveric donation is very underdeveloped. Mexico is one of the last countries in the region in terms of deceased organ use, but the number of kidney transplants with the use of living donors is 17.3. The total number of kidney transplants from deceased donors is more than twice less – 7.2 [18]. There is no ban on the use of 'brain-dead' donors, but the low level of deceased donor development is primarily due to the cultural characteristics of the local society.

Medical anthropologist Megan Crowley-Matoka offered one of the most interesting explanations of the Mexican phenomenon. In her many years of research, she pushed away from one case that could be considered paradigmatic. The parents of a young man who needed a kidney transplant went to Germany, his mother's homeland. There, both doctors and maternal relatives insisted on a transplant from a deceased donor. However, the family made another decision and returned to Mexico, where the German mother donated her own kidney to her son. This act was not only approved by the Mexican relatives and doctors, but was perceived by all as completely justified and logical: a mother who gave birth to a child should, if necessary, donate part of her organ to the child.

According to the researcher's findings, this logic is closely related to perceptions about sexuality. Since conception is always the result of sexual intercourse and, consequently, the consequence of the mother's moral impurity, childbirth is presented as a moral redemption. The same applies to living donation of a kidney: it is a mother's atonement for carnal sin. Reflecting on this logic, the researcher also turned to the peculiarities of Mexican religiosity, which, in fact, was formed in the 16th century, when ancient Mexico was conquered by Europeans. It was during this period, after the moral humiliation suffered by indigenous Mexicans, that they first adopted the religion of their conquerors, Catholicism. It is noteworthy that the source of the indigenous religious feeling was the image of the Virgin of Guadalupe, which since then has been the most revered Christian symbol in the New World. The image of the Mexican Madonna combined the features of maternal sacrifice with the cultural and religious choices of the Mexicans themselves, who from the mid-16th century became a single nation of indigenous people and their conquerors. In addition, according to Crowley-Matoka, another Mexican woman was deeply rooted in the public mind of the Mexicans, La Malinche, an Indian woman from a noble family, who was given out as a slave to the ruler of the Aztecs, and then presented to them by the leader of the conquistadors Hernan Cortes. By becoming Cortés' concubine, she also became his best spy, helping the Spaniards conquer Mexico. If we bring both of these stories that are important for modern Mexicans to a logical conclusion, the thesis about the naturalness of mother's sacrifice becomes clearer. Every mother in Mexico is first a La Malinche, a traitor to her people, committing a carnal sin with the enemy, and then the Virgin of Guadalupe, mother of the deity, making a redemptive sacrifice [28, 29].

For most Mexicans, the idea of posthumous organ donation is unacceptable. Crowley-Matoka links this to the Mexicans' belief in posthumous resurrection and their belief that the body should remain intact after death, without damage. But along with the arguments relating to the sphere of spiritual culture, according to the researcher, factors of material and cultural order also play an important role. In particular, she noted the poor material infrastructure in Mexican hospitals, the absence of intensive care units in most of them and the apparent lack of ventilators. In addition, the country lacks specialists capable of making reliable diagnosis of brain death.

Crowley-Matoka's work also shows that the naturalness of maternal donation for Mexicans is well aligned with available evidence, although in some cases it may not seem so. In particular, statistics collected by the researcher shows that brothers and sisters are much more likely than mothers to donate to each other. In 12 years of

observation, 168 cases of organ donation by sisters and 160 cases of organ donation by brothers were identified (328 cases in total). In turn, children sacrificed organs for parents 63 times (31 times by daughters and 32 times by sons) while parents donated 76 times for their children (46 times by mothers and 30 times by fathers). Spouses donated organs to each other 42 times – 35 times by wives to husbands and only 7 times by husbands to wives. The same uneven distribution of donor organs between the sexes as between spouses is noted between siblings. Sisters donated 93 times to brothers, while brothers donated half as many, 46 times, to sisters. Siblings were more willing to donate their organs to relatives of the same sex: brothers to brothers 115 times, sisters to sisters 46 times. Despite the fact that all these facts cited by Crowley-Matoka show slightly more sacrifice by Mexican women than by Mexican men [28], we tend to emphasize the main conclusion of all her work: in Mexico, organ donation is a family affair for a variety of reasons. It is because the family is the support for all its members, that is the main consumer of donor organs. Mexicans are not known for extreme individualism. Although some family members willingly donate their organs to others, the point is always to ensure not only the survival of the individual but also the family. All organs are in one way or the other redistributed within the family structure, and there is a moral sacrifice for family survival.

In general, most societies with traditional views, or developing societies, may be considered more willing to accept living organ donation than deceased donation. Unlike Europeans and North Americans who adhere to rationalistic ideas about man, the vast majority of the population in developing countries rejects materialistic views of body and soul. In the West, man is thought of as a sentient being, and the brain is considered the organ of the mind. If the brain dies, then the man dies too. Not the same in traditional societies where brain death is not the death of man at all. In the space of living religious consciousness, death is always something more, a transition to a new state including by the person himself, whose body, even in its postmortem state, is thought to be the sanctuary and property of the Supreme Being.

Turkey

Turkey is a large country where a secular government has been in power for almost a century, and the majority of the population professes Islam, with half in a very moderate form. Its geographical position makes it half a European country, and this remarkably connected with the modernization policy that the authorities have been implementing in various aspects of economic and cultural life. Turkey's experience indicates that the majority of the population is reluctant to allow doctors to use the organs from a deceased donor. Data for 2017 indicate an extremely low level of donor activity for cases of heart, lungs, and pancreas transplantation, i.e. organs that can only be removed from a deceased donor. In contrast, the number of liver transplants from a living donor is quite high – 13.5 persons per million population, and the number of kidney transplants from a living donor is 32.8 persons per million population; this is one of the highest rates in the world (in Europe, only the Netherlands records same figures). Moreover, the level of activity for deceased kidney donation in Turkey is very low – 8.6 (in Europe it is lower only in the Orthodox Greece, Bulgaria, Serbia and Moldova, as well as in Russia) [18].

Special studies show that predominance of traditional views in Turkish society was key to the failures of the national transplant program in the 1990s. Encouraging various forms of modernization, the Turkish government at the same time initiated the creation of a network of private clinics for the middle class and wealthy foreigners, where organ transplants started. This inevitably led to excesses in the practice of acquiring donor organs. As shown in a study by A. Sanal, at the turn of the 1990s and 2000s, clandestine organ trafficking spread in private Turkish clinics, involving some local doctors. Organs were obtained from the bodies of the poor who died in psychiatric hospitals, persons who committed suicide, and victims of major earthquakes. Donor organs were often purchased from the poor, who were specially brought to Turkish clinics from India, Iraq and other places. Assessing the scale of the scandal in Turkish transplant medicine of this time, Sanal calls it a significant scandal. He speaks of these opportunistic Turkish doctors, such as the infamous Dr S (a famous transplant surgeon in the Middle East), sardonically as the "Robin Hood" of Techno-Turkey, acknowledging that they take scarce wealth (organs) from the poor to give to the rich [30, 31]. Turkey, at least until the 2010s, was unable to create a transparent organ donation system, and the population was skeptical of all existing donor practices.

Pakistan

Pakistan is one of the fastest growing countries in Asia. There is also a secular, military-supported government in power and a multimillion-dollar population that professes Islam. Transplantation program, implemented in the country since 1985, is associated exclusively with living organ donation. In the early 2000s, the proportion of patients with severe forms of kidney disease reached 100 people per million population, while about 600–700 operations were performed annually in the country. There is no deceased donation, since transplantation involving the use of brain-dead donors is prohibited by law. At the same time, although Muslim clergy and scholars from Muslim academic centers recognize that deceased organ donation does not contradict Islam, it is rejected and perceived in the mass religious consciousness as an abuse of a dead body. Dominance in the minds of the population

of family-oriented collectivism, which suppresses any autonomy of an individual and his rights does not create a basis for development of posthumous donation. A major transplant center in Pakistan, the Sindh Institute of Urology and Transplantation, has been successfully operating in the country. The organizers were able to adapt the cultural values of Pakistanis to their interests: it carries out kidney transplants only from related donors, and the idea that donation is a moral obligation of every person to a member of his family is actively encouraged. At the same time, major shortage of donor organs is forcing many Pakistanis to look for organs abroad [32–34].

For a quarter of a century now, the medical community, via the WHO and the media, has been persistently talking about global organ shortage, and this shortage does exist where transplant surgeries are performed. Ironically, however, this shortage can come in many different forms. South Asia, primarily India, as well as Sri Lanka and Bangladesh, have long had other kinds of shortages – "shortage is not of donors but of recipients" [35]. A number of recent studies conducted by medical anthropologists indicate that donor practices can be heavily affected not only by the cultural environment, but also by the socio-economic situation.

Bangladesh

Bangladesh is one of the poorest nations in the world. Of its 150 million population, 78% live on less than $2 per day. In the early 2000s, the country took on the sad glory of another "world organ market". Its capital, Dhaka, is a place where the number of people willing to sell their organs (kidney, cornea, part of the liver) is immeasurably greater than the number who are willing to buy them. That is why organ prices tend to decline, while cynical, entrepreneurially-inclined brokers and organ buyers shamelessly deceive the poor who want to sell their organs.

In the mid-2000s, medical anthropologist Monir Moniruzzaman undertook a lengthy study in Dhaka, during which he interviewed 30 local men and 3 women who sold their organs. He also talked with urologists and nephrologists involved in transplants. The information received is nothing short of depressing. Almost all the people who sold their organs were disappointed. In most cases, the buyers did not even pay them the entire promised amount (about US$1,400). After the operation, everyone had a huge scar on their body, which might not have happened if the operation had been done using the laparoscopic method. Almost no one received proper medical care after organ removal. They were forced to return to completely unsanitary conditions after a very quick discharge from the hospital. Most began to have health challenges, as well as major psychological problems. Some soon lost their marriages. None of them could use the money to at least somehow improve their lives, and many of them did not even have enough to cover all debts. Donors who sold their kidneys invariably remembered the day of their operation as the darkest day of their life. One of those interviewed by Moniruzzaman said that he feels "only half human" after the surgery [36, 37].

The national law on organ transplantation in Bangladesh was adopted in 1999, and according to this law, organ trafficking is officially prohibited in the country. Criminals face a hefty fine and a jail term for any violation. In reality, however, no one is punished for this. Besides, the country's five largest newspapers regularly feature adverts by buyers ready to buy an organ. In Monizzaman's view, even the term "donation" itself seems inappropriate for Bangladesh. People don't give organs here; they sell them out in the open. All this is not only a consequence of the poverty of the vast masses of the population, but also of what the anthropologist calls "bioviolence." The richest organ buyers prefer to take their "donors" abroad, usually to India or Singapore, and already have an operation there. Those who are not so wealthy use the services of local hospitals, such as the Sheikh Mujib Medical University Hospital in Dhaka. The wealthiest fly to the US, bringing with them the purchased organ. The altruistic philosophy, warmly endorsed by the world medical community, according to which the life of some people can be saved by the lives of others, looks completely different here: the lives of the rich are extended at the expense of the lives of the poor. Scheper-Hughes' work shows how the global flow of living donor organs follows the modern route of capital: from poor countries to rich countries, from South to North, from Third to First World; there is a kind of "medical apartheid" [38, 39].

CONCLUSION

The concept of "organ shortage" has firmly entered the professional discourse of transplantation medicine and became a peculiar reflection of the current crisis of the philosophy that underlies the modern transplantation practice. This is the philosophy of altruism, which was first developed back in the 19th century by French philosopher Auguste Comte. Guided by the philosophy of altruistic donation, transplantation medicine representatives call on other members of society to share the ideals of this philosophy – volunteerism, gratuity, solidarity, etc. However, the situation with the global organ shortage clearly indicates that consensus is not always reached between professionals and society on this issue. Society does not necessarily accept the philosophy (ethics) of altruistic donation, at least not in its entirety. This fact necessitates a more thorough study of the society's attitude towards organ donation. In this regard, the global problem of organ shortage cannot be seen only as a problem for the professional medical community. It requires

an interdisciplinary research, joint work among doctors and humanities scientists.

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