

Review Article

The Legal, Ethical, and Cultural Issues of Xenotransplantation in Iran

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ABSTRACT

Background and Aim: Xenotransplantation is a question of "ethics between man and animal". Organ transplantation must be viewed concerning the prevailing cultural, religious, and socio-economic conditions of a nation. The major limitation to applying xenotransplantation for the treatment of disease is a shortage of human donors. We may come up with the question of whether xenotransplantation in Iran is practical or if we will have legal, ethical, and cultural problems.

Methods: This research is analytical- descriptive. We first discuss xenotransplantation and its effect on it human rights and human dignity and animal rights in Islam. Then, we will explain the personal, social, and cultural effects of xenotransplantation in Iran, the ethical response to this issue, and the necessity of legislation about xenotransplantation in Iran.

Ethical Considerations: Ethical principles were considered in searching and citing the literature.

Results: In recent years, the necessity of xenotransplantation has increased and thousands of men, women, and children suffer from end-stage organ failure in Iran. Regarding this, the present study evaluated Xenotransplantation with attention to animal rights in Islam, laws, ethical and legal state, and religious and cultural beliefs in Iran. In Iran, there are no special laws about this issue and there is just research guideline for researchers that it is not enough and complete. It will cause problems for patients who need essential transplant operations.

Conclusion: Although a comprehensive investigation of this issue has not been accomplished, we can find problems with paying attention to legal and religious beliefs in society.

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Introduction

The first paragraph of Article II of the Universal Islamic Declaration of Human Rights (5 August 1990) states that "Life is a divine gift and a right for every human being is guaranteed...." The Declaration starts by saying "All men are equal in terms of basic human dignity" (note that the phrase is equal to "human dignity" not equal to "human rights") and forbids "discrimination based on race, color, language, belief, sex, religion, political affiliation, social status or other considerations". It goes on to proclaim the sanctity of life, and declares the

"preservation of human life" as "a duty prescribed by the Shariah" (1). Also, Article 3 of the universal declaration of human rights (1948), emphasizes to right to life (2). Also, article 6 of the International Covenant on civil and political rights states that every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life (3).

In line with this task, in the second principle of the Constitution of the Islamic Republic of Iran, it has been noted that " Dignity and worth of human beings and their freedom are coupled with his

responsibility before God", and his physical and spiritual life under the principle 22 (4).

In most developing countries, there is a "human organ shortage" with waiting lists for the performance of transplantation. Recently, in Iran, the human organ shortage is increasing. In this human organ shortage context, new technologies are a welcomed expectation of both individual patients and overall society. In particular, xenotransplantation and genetically modified human organs obtained through human cloning and stem cell technology are promising tools for overcoming many untreatable diseases. However, an ethical, legal, and economical evaluation should be performed to ascertain if these technologies should be implemented (5).

On the other side, Xenotransplantation marks a qualitatively new challenge in medical technology assessment. The reasons for this claim are twofold: (i) in contrast to more traditional medical interventions, xenotransplantation involves risks not only to the patient but also to larger segments of society, thus to public health in general. (ii) While most medical technologies demand assessment and risk management at the time when the technology is sufficiently developed to be put into practice, xenotransplantation demands proactive action at a very early stage of development (6).

A particular challenge for any assessment of xenotransplantation is the inclusion of a satisfactory approach to the ethical issues involved. An ethical issue of xenotransplantation and acceptance of it in Muslim society is important. Xenotransplantation is like a double-edged sword and paying attention to society, culture, and religion in this issue is so important.

In addition to the problems raised by every transplant, it seems to us that there are three issues specifically related to xenotransplantation: 1) the acceptability of man's intervening in the order of the creation; 2) the ethical feasibility of using animals to improve the chances for survival and well-being of human beings; 3) the possible objective and subjective impact that an organ or tissue of animal origin can have on the identity of the human recipient.

In Iran, there is no special law for xenotransplantation. On another side, Islam's respect for human life, human dignity, animal rights, and organ shortage is increasing. We should analyze this issue for Iran society and use the idea of jurisprudence and jurists about it.

Ethical Considerations

Ethical principles were considered in searching and citing the literature.

Methods

This study is interdisciplinary research that includes both medical, ethical sciences, and law. According to this issue, we need to analyze the subject concerning governing culture, Laws, religious beliefs, and ethics in Iran. The theological state about animal rights takes into account the pleasure of the action. The authors study medical and ethical books, laws, and utilitarianism texts about this issue in the first and after library research and analytical analyses, of this study.

Findings

a- Xenotransplantation and its effect on its human rights and human dignity

Human dignity is a useful concept in xenotransplantation, one that sheds important light on the whole range of these issues. Human dignity is an idea of central importance today. It plays a key role in the international human rights movement, and it figures prominently in many documents that ground political principles for individual nations. It also plays a role in abstract theories of justice and human entitlement.

Dignity appears to be an important concept in ethics. The word is used frequently in international documents such as the Universal Declaration of Human Rights of the United Nations and the European Convention on Human Rights and Biomedicine. As Ronald Dworkin has noted, the very idea of human rights depends upon 'the vague but powerful idea of human dignity' (7).

The subject of a right, the right-holder, might be most obviously an individual. But it might also be a group—a family, a tribe, a company, a nation, a state, a region, a culture, or even the globe itself (as in the journalists 'cry' the world has a right to know) (8).

The subjects of Human Rights are not members of this or that society, but the community of humankind. There is some question about full membership in this community, for example for children, or the insane (8).

The main core of Islam, the Quran, has several verses that pertain to the human condition and position in this world. According to these

conditions and world position, a variety of duties are determined for the human race. An important characteristic of humans is dignity, which has several meanings that include liberty, self-esteem, and autonomy, among others. Dignity for human beings results in an individual having responsibility for himself and others, including God (9). Tremendous effort is needed to determine the importance of this subject in xenotransplantation by undertaking additional study and research to highlight the Islamic theory that pertains to the place of humans in the world.

Discoveries and advances in biotechnology are producing new social realities which must be appraised properly from an ethical point of view. Vitaly important in this task is the principle of human dignity, which is examined here by the author. Human dignity is crucial in seeking to resolve the conflicts that might arise as a result of the new possibilities opened up by modern biotechnology, such as embryo research, predictive diagnosis, gene therapy, human cloning, or the issue of xenotransplants.

b- Animal rights in Islam

Laboratory animal procedures have made significant contributions to biomedical research in the past, as well as to the safety and efficacy evaluation of chemicals and products of various kinds. Some such use of vertebrate animals will continue for the foreseeable future, in the interests of human beings and other animals. Nowadays, the widespread and expensive use of animal models in medical research is quite common. It is certainly true that a few modern scientific methods could have been used for humanity if it were not possible to perform preliminary tests on animals (10). Legislation enacted in many countries and regions of the world during the 1980s requires that laboratory animal use be reduced, refined, and replaced wherever possible, for ethical and scientific reasons, in line with the three Rs concept put forward by W.M.S.Russell and R.L. Burch (11).

Animals have their specific value that man must recognize and respect. Animals and other living things were created by Allah, the Lord of the Universe. They have their independent existences and modes of living. Allah has said in the Holy Qur'an that every animal has its own communal life. Islam has always viewed animals as a special part of God's creation. Mankind is responsible for whatever it has at its disposal, including animals

whose rights must be respected. The Holy Qur'an, the Hadith, and the history of Islamic civilization offer many examples of kindness, mercy, and compassion for animals. According to Islamic principles, animals have their position in the creation hierarchy and humans are responsible for their well-being and food (12).

Islam strongly asks Muslims to treat animals with compassion and not to abuse them. Prophet Muhammad (Peace Be Upon Him) often chastised his Companions who mistreated animals and spoke to them about the need for mercy and kindness (12).

The Holy Quran contains many examples and directives about how Muslims should treat animals. The Quran describes that animals form communities, just as humans do:

"There is not an animal that lives on the earth, nor a being that flies on its wings, but they form communities like you. Nothing have we omitted from the book, and they all shall be gathered to their Lord in the end." (13)

The Quran further describes animals, and all living things, as Muslim – in the sense that they live in the way that Allah created them to live and obey Allah's laws in the natural world.

"Seest thou not that it is Allah whose praise all beings in the heavens and on earth do celebrate, and the birds (of the air) with wings outspread? Each one knows its own (mode of) prayer and praise, and Allah knows well all that they do." (14)

"And the earth, He has assigned it to all living creatures." (15)

Animals are living creatures with feelings and connections to the larger spiritual and physical world. We must consider their lives worthwhile and cherished.

"And the earth, He has assigned it to all living creatures." (16)

For many people, the principal ethical problem raised by xenotransplantation will concern the relationship between human beings and other animals, especially in traditional society. Many would endorse the view that animals have interests, particularly in the avoidance of suffering, that should be respected, but that in certain limited circumstances those interests may be outweighed by the interests of human beings provided that everything possible is done to minimize distress to the animals (17).

The essence of the problem is that, if animals are to be used for medical purposes in ways that

would not be considered ethically acceptable if applied to human beings, then there must be some basis for distinguishing between animals and human beings. If there are no convincing reasons to ascribe to animals a lower moral status than that ascribed to human beings, then the use of animals for medical purposes would be hard to justify (17).

Xenotransplantation is gaining attention globally and when Iran became an approach to therapy with animal organs, our society is not prepared to accept it. However, there have been various limitations to organ transplantation and we face ethical problems.

c- Personal, social, and cultural effects of xenotransplantation in Iran

If xenotransplantation by pigs was realized and organs to be transplanted were in short supply, there would be a drastic reduction in suffering for people on waiting lists. One well-known dilemma is the distribution of organs. There is an extreme theory entitled "Survival Lottery", suggested by J. Harris which suggests that all members of the human race should be registered. Then, for example, if someone notices that A's liver matches B and A's lungs match C, A should give up his life for the survival of the other two members of the human race. Harris suggests that this would be more beneficial to society (18).

An important question is how xenotransplantation might affect individual recipients in Iran. Everyone has the right to health and we speak about the high value of humans. A person's self-image is related to their perception of the body. When assessing the impact of xenotransplantation, it will be necessary to consider how a person's perception of their body, and their identity or self-image, is affected. A person's sense of identity also depends on a history of involvement with other persons, as well as customs and traditions in Iran's society. Thus, the impact of xenotransplantation will depend to an extent on the responses of health care workers, carers, family members, and others close to xenograft recipients. Any assessment of xenotransplantation should take into account its potential impact on these relationships.

Paragraph 1 of Article 6 of the Convention on the Rights of the Child is recognized the child's inherent right to life. Also in Article 24, the right of the child to enjoyment of the highest attainable standard of health and to reduce mortality is guaranteed (19). Special issues arise in the case of

children. There is an especially acute shortage of hearts for transplanting into newborn babies with congenital heart defects and of heart lungs for transplanting into children suffering from cystic fibrosis. It has been suggested that this might justify early xenotransplantation trials involving babies or children (17). This approach causes us to see humans as an instrument. Therapeutic research must offer some benefit to the patient. The agreement of any child to participate in therapeutic research such as xenotransplantation should always be obtained. Young children may not understand why they are ill and may perceive it as punishment. Self-image and the peer group are particularly important for adolescents, and this may lead to problems with adjusting to receiving a transplant, coping with scars, and the physical side-effects of immunosuppressive drugs. Adolescents' increased desire for independence may lead to resentment of the restrictions associated with immunosuppressive drug regimes and problems with compliance (17).

Research scientists show that the heart of a pig is the best alternative to the human heart for transplantation. It is sometimes argued that if any person receives a pig organ for transplant, she/he will have problems with identity. But, Islam believes that if a member of an unclean animal joins the human body, an unclean member of an animal finds life after transplantation into the human body, and membership of the animal comes in cleanliness (20).

Conclusions

For a long time, pluralistic societies express beliefs and views that indicate individual freedom. Researchers should not impose their beliefs and values on patients in need. Moral freedom, the principle of equal dignity between men, and non-instrumental values them is considered a basic moral framework. Human dignity implies that opening the human body plus the components of the human body has valuable. So, immoral usage is a breach of ethics.

Cure with xenotransplantation continues around the world. In Iran, people have little information about it. This situation will cause problems in the future for the cure of persons who need a transplant and we face ethical and legal questions. It is so important to introduce xenotransplantation to people by selecting a good way. In this way, the state of Iran has an important role in awareness and reducing moral and legal vacuum.

All human beings are equal and not a tool for research on new technologies to be applied. It seems that more guidelines for Xenotransplantation rather than the Transplantation of human organs are needed. On the other hand, if this project succeeds in the future, due to its high cost will not be available to anyone.

In Xenotransplantation for children, the global assessment of the rights of the child is necessary. Every human being is a member of a society that has existential solidarity with other people is wide.

Xenotransplantation has effects on identity. Perceiving or imagining the person from himself is related to his understanding of his body. In Iran, there is another concern that emphasizes the importance of transparency in research activities, policies, and the acceptance of the community. In the health care system is essential to set resource allocation policy with explicit and clear criteria and these criteria are associated with technology and human resources management.

Assessment of the need for Xenotransplantation, create a system to identify infections and disease resulting from Xenotransplantation in the health system, state measures for identifying Xenotransplantation procedures in his territory, ban and punishment of illegal actions, the guarantee of public health, legislative, reveals justification of researchers for testing and collaboration with health officials, including cases that Iran state should be paying attention.

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Conflict of Interest Statement

The author declares that they have no conflicts of interest.

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