

Bioethics and Organ Transplantation in Japan^{*1}

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Brain Death and the Organ Transplantation Law

In today's society, heart and liver transplantation requiring organ donation from a brain-dead patient is becoming an issue of high interest not just to medical professionals and the families of those patients awaiting organ transplants but also to the general public.

The world's first heart transplantation in a human from a brain-dead patient was performed in 1967 by Dr. Christiaan N. Barnard in South Africa. The first heart transplant operation in Japan took place the following year. When the recipient died 83 days after the operation, the doctor who performed the operation was accused.

This case is said to have been a major cause of distrust of health services as the patient was allegedly forced into undergoing the aggressive heart transplant surgery. Some people have criticized this as having led to heart and liver transplantation in Japan, particularly from brain-dead donors, to lag behind. Sorry to say that the situation of organ transplantation in Japan has progressed slowly compared with the United States and Europe, where heart and liver transplantation began to spread rapidly from around the 1980s.

The Organ Transplant Law in Japan was implemented in 1997, making the donation of organs for transplantation from brain-dead persons legally possible. In reality, however, standards are far stricter than those in the United States and Europe and organ donations from brain-dead patients is only around 10% of all organ transplant donations. The problems with the content and implementation of this law have been pointed out.

Despite Japan having some of the world's best health standards, many heart and liver patients are unable to receive a transplant because no compatible donor can be found. Under the current law, the donation of organs by patients aged less than 15 years is not possible; thus the media has reported many cases of families forced to collect donations and travel overseas for transplantations for infants and children as the issue of organ transplantation for children becomes a social issue.

The Japanese lawmakers submitted two bills to revise the Organ Transplant Law to the National Diet in August 2005. Under Plan A, the major changes to the law would be that brain death would be uniformly recognized as human death, the age restriction on donors of 15 years or old would be removed, and donation of organs for transplantation would be possible without the consent of the donor. Under Plan B, the current legal minimum age for donors would be lowered from 15 years to 12 years of age. Despite several differences, the two proposals are in the same trend with regard to easing conditions for organ donation and promoting organ transplantation in Japan.

After three other amendments were submitted to the Diet, the Plan A gained full Diet passage in July 2009. Under the revisions, the age restriction on organ transplant donors have been removed and donation of organs for transplantation with the consent of surviving family members, unless the deceased donor has expressed unwillingness to donate while alive, is possible. Most of the law revisions will go into effect one year from the date of promulgation, opening the way for long-sought organ transplants for children to be per-

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Table 1 JMA reports on organ transplantation

1988	Final Report on Brain Death and Organ Transplantation ¹
2005	Position of the Japan Medical Association Concerning Organ Transplants Based on the Judgment of Brain Death ^{2,3}
2007	Guidelines for End-of-Life Care ⁴

formed in Japan as well. With the Diet having approved the Revised Organ Transplant Law, it is imperative that it be applied appropriately so as to avoid confusion in medical practice, including the definition of brain death.

The JMA is involved in the process of legislative revision, as well as the issue of guidelines concerning organ transplantation and brain death and terminal care (Table 1).

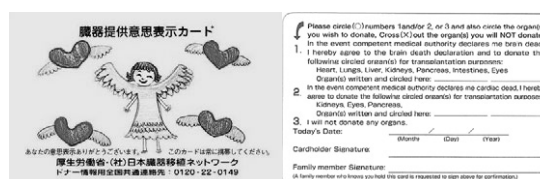
Emergency Medicine: Caring for both the donor and recipient

It goes without saying that legislative reform is important, but the situation will not change unless both patients and the general public overall gain a deeper understanding of heart and liver transplantation. Generally speaking, many people in Japan still seem to become hesitant if asked if they are willing to become donors themselves, despite there are many other people who will express a willingness to receive an organ transplant if required.

As matters stand, the donor card system (Fig. 1) cannot be said to have taken root in society. Even if the law is amended, the number of organ donors will not increase without the understanding of the families of brain-dead patients and it is difficult for the situation in Japan regarding organ transplants to change.

Nowadays, doctors are required to consider that there is, in some cases, a possibility of ceasing the attempt to save the patient's life at some point and having the patient's organs donated to save the life of someone else. In old days when organ transplant technology did not exist, they needed only to concentrate on saving the life of the patient that was brought to them.

Without policies to assist these doctors who are faced with such contradictory missions, the medical world could become increasingly difficult and the patient and doctor relationship could

**Fig. 1 Organ Donation Decision Card**

A "Donor Card" has been introduced as a means for people to express their willingness to donate their organs in writing since 1997.

be impaired. A doctor's first duty is to save the lives of the patients in their care. But at all stages of the process from emergency medical care to organ transplantation, they are also required to make cautious decisions and take appropriate action so that the lives of as many patients as possible can be saved. When organ transplantation is performed, doctors must work together with other medical professionals and transplant coordinators while quelling the anxiety of the patient and their family members, respecting the noble wishes of the donor.

The foundation that enables doctors to make correct decisions and provide the best possible medical treatment for the patient is their strict adherence to consistently high ethical standards; it can thus be said that doctors are more and more strongly required to deeply consider bioethical issues on a routine basis and make efforts to study.

JMA's Ethics-related Activities

The JMA carries out a variety of activities related to bioethics to provide guidance for appropriate medical practices and help doctors develop highly ethical qualities. Through the use of continuing education curricula, the journals, JMA News, and Internet transmissions, the JMA provides useful health information and information about



Fig. 2 Japanese version of the WMA Medical Ethics Manual

The WMA published its Medical Ethics Manual in 2005, and 15 translations have been completed and distributed throughout the world. The Japanese version was completed in 2007.



WMA General Assembly 2009, New Delhi

Fig. 3 World Medical Association (WMA)

The WMA is an international organization representing physicians founded in 1947.

Table 2 Policy documents related to organ transplantation adopted by the WMA⁶

1968	Declaration of Sydney on the Determination of Death and the Recovery of Organs (revised in 2006)
1985	Statement on Live Organ Trade
1987	Declaration on Human Organ Transplantation
1994	Resolution on Physicians' Conduct Concerning Human Organ Transplantation
2000	Statement on Human Organ Donation and Transplantation (revised in 2006)
2007	Statement on Human Tissue for Transplantation

ethical issues, cultivating and supporting continuing education.

In May 2007, the JMA translated “Medical Ethics Manual”⁵ of the World Medical Association (WMA) into Japanese and published 220 thousand copies, distributing them to the 160 thousand members of the JMA as well as to local medical associations and to all the medical faculty deans and students at medical colleges throughout Japan as part of our efforts to support medical education (**Fig. 2**).

As a teaching tool on medical ethics that are uniform worldwide, this WMA Medical Ethics Manual has already been translated into 20 languages and is read around the globe. The manual comprehensively covers a broad range of ethical issues that all medical professionals should read through at least once.

WMA Policies

The WMA is an international organization repre-

senting doctors worldwide; membership currently comprises medical associations from 95 countries throughout the world (**Fig. 3**). The JMA joined it in 1951 and has been playing a leading role in the organization. The issue of organ transplantation and ethics is an important theme that the WMA has also long discussed.

In 1968, the WMA adopted a Declaration on the Determination of Death, and in 1987 issued its first statement concerning organ transplantation. The issue of organ transplantation and ethics has been included in six of the main documents issued by the WMA between 1968 and 2007 (**Table 2**).

The “Declaration on Human Organ Transplantation” adopted at the WMA General Assembly held in Madrid in 1987 provides guidelines for physicians engaged in the transplantation of human organs. This declaration recommends, as a fundamental rule, that for the physicians, both donor and recipient are patients, and care must be taken to protect the rights of both. Physicians

should strictly follow the fundamental rule that it is not permissible for the best emergency care to be withheld from a patient on the premise that they are a potential donor. The WMA “Statement on Live Organ Trade,” adopted in 1985, strongly condemns the problematic practice of organ trading, and the “Resolution on Physicians’ Conduct Concerning Human Organ Transplantation,” adopted in 1994, strongly prohibits doctors from involvement in the use of organs from executed prisoners for transplantation. These are activities that doctors should have absolutely no part in and which we in Japan, too, must watch out for as we keep world trends in view.

The WMA “Statement on Human Organ Donation and Transplantation” was adopted by the General Assembly in Edinburgh in 2000 and revised in Pilanesberg, South Africa, in 2006, provides even more detailed guidelines and policies for doctors. The document covers a broad range of issues, including professional obligations of physicians, social aspects of acquiring organs, free decision-making based on sufficient information, determination of death, and fair dispensation.

The “Statement on Human Tissue for Transplantation” adopted by the WMA General Assembly in Copenhagen in 2007 also requires that, in addition to organ transplantation, doctors maintain high ethical standards in tissue transplantation, such as corneas, bone, blood vessels and cardiac valves.

Concluding Remarks

The issue of bioethics is not limited to the medical field but affects many other connected areas. While there is undoubtedly a need to review the traditions, culture, and values of this country in search of a suitable approach, we must also focus on the underlying bioethics that exists univer-

sally throughout the world.

With regard to organ transplantation procedures, doctors should provide patients with sufficient information, and patients should adequately understand and accept that information before making a decision. This fundamental rule of “informed consent” is an extremely important item that should be observed. Accompanying the benefits brought by advances in medical technology and pharmaceuticals, humanity today has been laden with a problem that was unimaginable in the past. We must also take into consideration individual values, culture and many other factors. Consequently, resolving this issue is not something that should be rushed. It is vital that solid discussions and debates be carried out repeatedly and built upon.

With regard to the issue of organ transplantation, physicians can be said to have a mission to further deepen understanding of medical ethics and steer the right direction of this debate. In speaking about “Bioethics and Organ Transplantation” from a physician’s standpoint, we can sense the highest mission of physicians.

We are facing with another dimension of biotechnology including regenerative medicine as multidisciplinary tools. Accordingly, we are in the position to find a solution in the ethical field to meet the people’s demand at the various clinical fields, such as regenerative medicine, telemedicine, and so on, in the near future.

That is, to find ways to best help and save people who are sick in this ever-changing world of today.

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