Nephrol Dial Transplant (2005) 20: 1303–1306
doi:10.1093/ndt/gfh911
Advance Access publication 26 May 2005

Nephrology
Dialysis
Transplantation

Personal Opinion

The question of organ procurement: beyond charity

Henri Kreis

Faculty of Medicine Paris-Descartes, Department of Transplantation, Hôpital Necker, Paris, France

Abstract

Over the past 15 years, the shortage of organs for transplantation has worsened. This has forced clinicians to review alternative approaches to organ procurement. These new approaches, however, may have serious implications both for patients and for society as a whole. Ever since the first cadaver organs were used for transplantation, organ procurement has relied on the altruism and goodwill of donors. It now appears that this 40-year-old policy is proving unsuccessful. In order to increase the availability of suitable organs and allow cadaver organ transplantation to continue, it is time to consider new strategies other than donation. Among all the potential methods of organ procurement, including donation, abandonment, sale and societal appropriation, only the latter has never been ethically discussed or implemented. This article considers a variant of this approach defined as 'conditional societal appropriation' as an ethically acceptable possibility. It has the potential to become the principle method for obtaining the necessary organs for transplantation in the near future.

Keywords: donation; ethics; organ procurement

Introduction

Organ transplantation has always been performed using the most promising organ source available at the time. Thus, at the beginning of the 20th century, animal organs were the first to be used by early transplant pioneers [1,2]. Because of persistent failure rates using animal grafts, it was not surprising that by the middle of the 1920s human organs were being considered. However, only cadaver organs (or so-called 'free kidneys') were used, mostly taken from executed prisoners [3–7]. Initial failures using cadaver organs led doctors to consider using organs from genetically related living donors, despite legislation forbidding this practice [8,9]. This resulted in the first successful transplant, which finally demonstrated that organ transplantation could be a realistic technique. Even in the early days of transplantation, however, it was quickly realized that living donors could not be the primary source of organs.

In the late 1960s, cadaver organs were deemed to be the first ethically acceptable organ source. These could be made available to everyone without harming healthy individuals. It soon became apparent, though, that collecting cadaver organs was not as easy as first thought, even in France where organ procurement was made possible in the absence of family consent [10]. A spirit of altruism was therefore promoted in an attempt to encourage individuals to donate. As far back as the 1970s, when organ transplantation was still in its infancy, organ procurement programmes based on altruism were beginning to be successfully implemented. However, in parallel with the development of transplantation, which is now a routine procedure, transplant doctors became progressively aware of the complexities of obtaining human body parts. Nevertheless, for >15 years it has not been possible to re-valuate the initial altruistic approach to organ procurement, despite a deplorable and unacceptable shortage of suitable organs for transplantation.

Looking back over the history of organ procurement, I am now convinced that our course of action was probably wrong when we persisted in considering the altruistic concept of donation as compulsory for obtaining the necessary organs for transplantation. There is concern that the goodwill which underpins the system of voluntary organ donation may not be sufficient to support this approach. This raises the central question of whether or not cadaver organs will remain the major source of transplant organs. If not, what are the alternatives and what does the future hold for organ transplantation? It is now timely to consider other ethical ways of increasing the organ supply.

Correspondence and offprint requests to: Henri Kreis, MD, Professor of Nephrology, Consultant, Faculty of Medicine Paris-Descartes, Department of Transplantation, Hôpital Necker, 149, rue de Sèvres, 75743 Paris Cedex 15, France. Email: kreis@necker.fr

Approaches to organ procurement

The major question to answer before new policies for organ procurement can be proposed is the age-old one: who owns the human body? Ownership of the cadaver is very ill defined in many countries. 'Except for the USA's fictional and parochial quasi-property rule and Australia's fairly advanced property rule in dead bodies, many jurisdictions still follow the dominant and ecclesiastically influenced no-property rule for dead bodies and body parts' [11]. One of the first issues that should be addressed before defining pertinent policies for organ procurement concerns the appropriateness of viewing organs as individual property, especially after the death of the person. Some religions consider that God gave the body to the individual and that it should be given back to God after death. However, this does not simplify the situation. In fact, it is clear that the body does not belong to anyone in the sense that an object does. This confusing situation leaves the door open to interpretation. One can concede that each individual should be allowed to determine the fate of their body, and no-one else.

So what are the major ethically acceptable approaches to human organ acquisition? According to Childress [12], there are four main methods of acquiring human body parts. The first three of these—donation (expressed and presumed), abandonment and sale—are possible only if human body parts are regarded as belonging to someone. The last approach, which I will call societal appropriation, depends on societal decision making. Most of these methods currently play some role in today's health care systems. For example, under our present laws and policies, donation is virtually the only way to procure solid organs. On the other hand, the sale of semen for artificial insemination is a common practice, and abandonment is frequently used for acquiring tissues for developing cell lines. Societal appropriation is rare and certainly more controversial. However, its possible utilization has probably been underestimated, or even rejected in principle. It may be time to start discussing this approach, but in a more ethical way than Spital and Erin proposed under the concept of conscription [13].

Ethical issues surrounding procurement policies

It is essential to reflect upon whether solid cadaver organs should continue to be procured almost exclusively via some form of donation or whether an alternative approach could effectively increase the supply of transplant organs without impinging upon moral principles.

Donation, whether expressed or presumed, has now been used in the majority of countries since the birth of cadaveric organ transplantation. This means that individuals determine what happens to their organs after death. In some countries, however, in the absence of a valid expression of the deceased's wishes, the family may decide whether or not to donate the organs. This legal right of individuals, or their family, to determine what happens to their organs is probably based upon the instinctive presumption that a person's body belongs to them [14]. In the USA, the Uniform Anatomical Gift Act views the cadaver as the property of the family. However, with such an approach, it is not always easy to determine which family member has the dominant voice. Usually, one member of the family, and not the deceased while they were alive, emerges as the primary cadaver organ donor. Nevertheless, the moral authority to donate an organ from a cadaver they do not own remains questionable. The authorized family member may be conveying the deceased's wishes, acting only as the instrument of the donation, in which case this raises no ethical questions, the donor remaining the deceased while competent. If, however, the wishes of the deceased are not known, any position taken by a family member regarding donation will be their own, and not the deceased's, who will then be regarded only as the potential source of organs, or that of other family members who may have opposing viewpoints. In this case, the principle of autonomy is not respected.

Entrusting the family with the right to donate the deceased's organs does not simplify the situation. In fact, in a number of countries, a clear legal definition of 'family' is lacking. Similarly, who knows which family member has the authority to either convey the deceased's wishes or to decide to donate? The father, the mother, the spouse, the lover, the siblings or the children (and which one)? To negate this question, many countries have adopted the concept of presumed donation. Presumed donation laws authorize doctors to remove organs on the basis of the deceased's presumed consent. Properly understood, presumed consent merely interprets the presumption of an individual's wishes in the absence of an actual statement. However, silence may only indicate a lack of understanding of the means of dissent or of the proposed course of action. Who is entitled to make this presumption? What is the basis upon which this presumption is made? These are still unanswered questions. In many countries where organs are retrieved on the basis of presumed consent, the legislation does not require positive arguments in favour of a tacit consent from the deceased while alive, simply the absence of an explicit refusal, which doctors have to seek among family members. Therefore, even in countries which have approved presumed consent regulations, the actual donors remain the family, and their refusal, in France at least, accounts for >60% of all non-used donors.

Neither expressed nor presumed donation policies appear able to increase the number of organs donated. Evidence gathered from over almost 35 years of organ procurement founded on altruistic donation suggests that either the concept of altruism is not spread as widely among the population as hoped, or that there is a distrust of doctors by the public, or both. This concern increased throughout the 1990s, as relationships between patients and doctors became more

adversarial. In a system of presumed donation, it is highly probable that such attitudes of distrust would lead individuals to take affirmative action to remove themselves from the list of presumed donors if they were aware of its existence.

The fragility of any system based on public goodwill must be recognized, and proposals for public policies on organ procurement must try to reduce the role played by goodwill as much as possible. Otherwise, as experience has shown, continuing in this direction would do more harm than good. It is impossible to plan a complicated health service such as organ transplantation based on public goodwill, which can fluctuate with time.

Societal appropriation

One way of reducing the reliance on individual goodwill may be to adopt a system based on societal appropriation. Societal appropriation (also known as 'conscription' [13]) does not require consent nor recognize the principle of autonomy, and as such appears to be highly unethical. Clearly, however, it is not sufficient simply to dismiss this principle or that of non-maleficence as being 'not absolute' in order to circumvent them [1]. In fact, according to Jonsen [15], the primary purpose of consent is to protect the moral autonomy of people, allowing them to govern their lives by their own values and to protect themselves from harm and exploitation. However, this purpose 'is no longer relevant to the cadaver, which has no autonomy and cannot be harmed'. The secondary purposes of consent include respecting the beliefs of the deceased while alive or observing cultural burial practices. Jonsen states, however, that these secondary purposes, 'would seem to yield before the significant value of therapy for those suffering from serious illness . . . The genuine possibility of being a significant benefit to others overrides any secondary purposes that consent and permission might have' [15]. Thus, forensic medicine validates autopsies in some cases despite objections from individuals or members of religious groups. There would appear to be public support for, or at least no apparent objection to, these legal practices because the procedure is considered important for society. Society now needs to address the question of whether legal autopsy is more important than saving lives through transplantation. The fact is, however, that respect for autonomy cannot be reasonably superseded unless society is under immediate threat and there is no acceptable alternative. It is not clear whether the benefit of saving the lives of other individuals justifies the societal appropriation of cadaver vital organs for transplantation.

Acceptable alternatives to this approach, however, have proved to be unproductive and potentially dangerous. The altruistic concept of organ donation, whether expressed or presumed, has failed. Entrusting the family with the burden of donation has achieved nothing except complication of the ethical, legal and social dilemmas of organ procurement. The current inclination to extend the use of living donors, including non-related donors and 'cross-over' donation [16], will not resolve the situation and certainly raises a number of serious additional concerns. I prefer not to consider the potential use of animals as organ providers.

Organ sale

Although organ sale is certainly effective, at least for the wealthy, in a free market it is probably much too dangerous a concept to be accepted by most societies [17]. The subtle distinction between direct payments and indirect incentives that has been proposed still makes this nothing more than an open organ market by another name. Even a state-controlled/licensed market model that would evenly distribute organs throughout society is far from being a perfect system [18] and maintains the organ market approach. The major drawback of buying organs is they become commercial entities, regardless of whether the buyer is an individual or the state. Modern societies are founded on the concept of non-patrimoniality, which precludes the buying and/or selling of the human body. This concept protects individuals from slavery, prostitution and body mutilation for commerce. Were society to approve the purchase of organs, even by the state, it would represent an important change in the basic principles upon which most societies are based. Contrary to the opinion of Matas [19], a 'regulated vending system' is fortunately not the only alternative to organ shortage.

The so-called 'Spanish system', which is undoubtedly very productive [20], is based on the argument that organ donation is important for society. Therefore, this activity receives a specific budget, like any other medical activity in the hospital, and the responsible staff become accountable for performance, which means that the budget allocated to the staff is dependent on the number of organs retrieved. This procedure may not be suitable in other health systems.

Conditional societal appropriation

Although societal appropriation has seldom been considered, the concept deserves serious debate. It is not clear, however, whether arguments to override the principles of autonomy and non-maleficence can be accepted by society at the present time. To respect the principle of autonomy, an individual's dissent must be taken into account. Thus, societal appropriation will become a 'conditional' process that is ethically acceptable and should bear much less risk than the proposed alternatives. This approach is more likely to be accepted by society and thus may prove to be the real answer to the question of organ procurement.

Based on this concept, society may declare that after a person's death, internal vital organs—but not the entire body—can be procured. This would help protect the religious and funeral rites of individuals. Although it may seem that this principle is similar to the concept of presumed consent, it differs in one very important respect. Conditional societal appropriation does not require anyone's permission and does not have to presume the decedent's will, which is one of the most sensitive aspects of presumed consent, as the presumption of others' will is not ethically acceptable. However, in order to acknowledge the principle of autonomy, a society willing to use the concept of appropriation for organ procurement should accept individual, and not family, refusal to donate.

Before conditional societal appropriation can be tried, a number of essential conditions must first be satisfied.

(i) The importance of transplantation for society must be debated first. Only if the society declares that it needs transplantation, as has recently been the case in France where transplantation is now recognized as a national priority [21], should societal appropriation be considered.
(ii) It should be proposed by Members of Parliament and not by doctors.
(iii) A pool of potential organs large enough to meet demand should be established.
(iv) Ongoing public education is essential when trying to initiate such a significant change in public opinion.

Currently, in view of other public responses, there is little reason to believe that this acquisition method would be easy to introduce politically, prior to society becoming fully informed and accepting the benefits of this concept. The 'goodwill' pathway, however, appears to have reached a dead end. Transplantation may not survive if we continue to repeat the same mistakes over and over again. Let us keep asking our societies these difficult questions, and hopefully this will generate positive responses, even if the process takes some time.

Conflict of interest statement. None declared.

References

1. Jaboulay M. Greffe de reins au pli du coude par sutures artérielles et veineuses. *Lyon Med* 1906; 107: 575–580
2. Unger E. Nierentransplantationen. *Klin Wschr* 1910; 47: 573
3. Kuss R, Teinturier J, Milliez P. Quelques essais de greffes de rein chez l'homme. *Mem Acad Chir (France)* 1951; 77: 755–764
4. Dubost C, Oeconomos N, Nenna A, Milliez P. Résultats d'une tentative de greffe rénale. *Bull Soc Med Hop Paris* 1951; 67: 1372–1382
5. Servelle M, Soulie P, Rouguelle J. Greffe d'un rein de supplicié à une malade avec rein unique congenital, atteinte de néphrite chronique hypertensive azotémique. *Bull Soc Med Hop Paris* 1951; 67: 99–104
6. Voronoy Y. Sobre el bloquero del aparato reticuloendotelial del hombre en algunas formas de intoxicación por el sublimado y sobre la transplantatión del riñon cadavérico como método de tratamiento de la anuria consecutiva a aquella intoxication. *Siglo Méd* 1936; 97: 296
7. Lawler RH, West JW, McNulty PH, Clancy EJ, Murphy RP. Homotransplantation of the kidney in the human. *J Am Med Assoc* 1950; 144: 844
8. Michon L, Hamburger J, Oeconomos N *et al*. Une tentative de transplantation rénale chez l'homme: aspects médicaux et biologiques. *Presse Méd* 1953; 61: 1419
9. Hamburger J, Vaysse J, Crosnier J, Auvert J, Lalanne CM, Hopper J, Jr. Renal homotransplantation in man after radiation of the recipient. *Am J Med* 1962; 32: 854
10. Décret no. 47-2057 du 20/10/1947. *Journal Officiel de la République Française* 1947
11. Nwabueze R. Biotechnology and the new property regime in human bodies and body parts. *Loyola of Los Angeles Int Comp Law Rev* 2002; 24: 19–64
12. Childress JE. Ethical criteria for procuring and distributing organs for transplantation. In: Blumstein JF, Sloan FA, eds. *Organ Transplantation Policy—Issue and Prospects*. Duke University Press, Durham, NC; 1989: 87–113
13. Spital A, Erin CA. Conscription of cadaveric organs for transplantation: let's at least talk about it. *Am J Kidney Dis* 2002; 39: 611–615
14. Peters DA. Protecting autonomy in organ procurement procedures: some overlooked issues. *Milbank Q* 1986; 64: 241–270
15. Jonsen AR. Transplantation of fetal tissue: an ethicist's viewpoint. *Clin Res* 1998; 36: 215–219
16. Delmonico FL. Exchanging kidneys—advances in living-donor transplantation. *N Engl J Med* 2004; 350: 1812–1814
17. Jha V. Paid transplants in India: the grim reality. *Nephrol Dial Transplant* 2004; 19: 541–543
18. Khajehdehi P. Living non-related versus related renal transplantation—its relationship to the social status, age and gender of recipients and donors. *Nephrol Dial Transplant* 1999; 14: 2621–2624
19. Matas AJ. The case for living kidney sales: rationale, objections and concerns. *Am J Transplant* 2004; 4: 2007–2017
20. Miranda B, Vilardell J, Grinyó J. Optimizing cadaveric organ procurement: the Catalan and Spanish experience. *Am J Transplant* 2003; 3: 1189–1196
21. Loi relative à la bioéthique. *Journal Officiel de la Républicque Française*. Loi no. 2004-800 du 6 août 2004 article 9. 2004