Kidney Vending: The "Trojan Horse" of Organ Transplantation

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As physicians and nephrologists who are actively engaged in the evaluation and the treatment of kidney transplant candidates, recipients, and donors, we are concerned by what we see as a growing threat to the core values that have permitted organ transplantation to flourish during the last half century. Kidney vending, once considered taboo in "respectable" circles, is being debated with some frequency, and in this issue of *JASN*, specific proposals for implementation have been made. To his credit, Matas (1) presents his case in a rational and dispassionate manner. In the professional and lay press, however, there has been a disturbing change of tone. Those who oppose vending have been derided as "bean-counters" and "high-minded moralists" (2); the current system has been described as a "failure" (3); routine psychological evaluation of donors has been described as "intrusive, demeaning" (4); the Institute of Medicine's caution against treating the body as if it were for sale (5) has been described as "outdated thinking" (6); and respected transplant professionals have been castigated in the national press because of their concern for the potential exploitation of donors (7).

There is a lot at stake. The altruistic impulses of living donors and of the families of deceased donors are on the auction block and risk being displaced by the uncertainties of an unfamiliar market place. Matas seems unconcerned by this possibility, and to some proponents of organ vending, the anticipated demise of altruism in organ donation even comes as a blessing (2). To the detractors of our current altruism-based system, the acceptance by the general public of the difficult concepts (brain death, donation after cardiac death, living donation, etc.) that are at the core of our work is taken for granted, because the supply of donors has been inadequate for the need. Dollars will solve our problem: Put kidneys up for sale (valued at approximately $90,000 by Matas's estimate [8]) and there will be enough organs for everyone. Imagine: No more waiting lists. And it all will be "above board" and run by regional organ procurement organizations and professional panels that will vet donors, protect their health, allocate the kidneys, and administer the finances (1)—all done in a manner that is beyond reproach. We are skeptical.

Those who are opposed to organ vending have been described as being "timid" (6), as if they lived in some ivory tower divorced from the "real world," but it is that real world that is the source of our concern. Living kidney donation is a safe procedure, but even in the most experienced hands, it is never risk-free. Safe donation, both for the donor and the recipient, requires honesty and openness about the potential donor's health, high-risk activities, and family history. Although it never can be taken for granted, in our current altruism-based system, openness generally can be presumed, and donors are compensated for the risk that they take by seeing the blossoming health of those they love or care for. In a vending system, in which regard for the recipient is divorced from the motivation for donation, powerful financial incentives for a donor not to be forthcoming about critical information could affect both their own health and that of the recipient (*e.g.*, a distant history of a melanoma; an uncle on dialysis; high-risk sexual behavior, perhaps). Recipients of vended kidneys have been reported to suffer a high rate of infectious complications, not all of which could have been prevented easily by routine evaluation (9). Would specially trained investigators need to be included in the transplant team to ensure the accuracy of the paid donor's history and to ensure public safety? Because the risk that the kidney sellers would take is compensated only by dollars, how are they likely to feel about themselves when those dollars run out? Available studies from countries that sanction or do not control kidney selling suggest that the lump sum that the sellers receive has little impact on their long-term financial security, and many end up worse off, financially and otherwise (10). There is no reason to believe that kidney venders in the developed world would be protected from this outcome.

We are confident that Matas and other proponents of a kidney vending system in the United States do not want to see the abuse of kidney sellers that is so common in the third world. But who would the donors be if not the disadvantaged and the vulnerable among us? How could we be sure that paid donors were not being manipulated or even blackmailed? To avoid the evils of "transplant tourism," Matas and others have suggested that in a "regulated" vending system, the market would be confined to self-governing geopolitical areas such as nation states or the European Union (11). In the United States,

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would paid donors have to be citizens? Could legal residents or even illegal ones be permitted to sell their organs? We live in a world where many industrialized nations struggle, often unsuccessfully, to protect their own borders against illegal entry. With so much money at stake, how would these activities be policed? Other countries learn from the sophisticated organ transplant system that we enjoy in the United States. What example would we be setting if we permitted vending? Representatives of developing countries have repeatedly expressed well-grounded fear that such a change in policy would make it even more difficult for them to control corruption and criminal exploitation of donors (12,13).

Our greatest concern is that kidney selling would distort and undermine the altruism and common citizenship on which our whole organ donation system currently relies. The term "crowding out" describes the hypothesis that the moral commitment to do one's duty can be weakened by financial compensation and monetary reward (14). It is not easy for parents to accept kidneys from their children; or to watch their children donate to each other; or for patients to approach their family, spouses, or friends. If kidneys could be bought, particularly if the government or an insurance entity was paying, then the temptation or even demand not to expose the potential altruistic donor to the risk that is intrinsic to the process could be overwhelming; and it is not only altruistic living kidney donation that could suffer. The approach to recently bereaved family members, an already extraordinarily difficult and profoundly sensitive task, could be made considerably more difficult by their knowledge that organs could be purchased for large sums of money and the bodies of their loved ones left undisturbed. Deceased donation is the source not only of kidneys but also of hearts, livers, lungs, and pancreata. Displacement of altruistic deceased kidney donation by vending has the very real potential of endangering precious opportunities for life-saving and life-enhancing extrarenal donation.

These considerations are not merely theoretical, and two "natural experiments" provide some insight as to the forces at play. Before 1997, when the British transferred sovereignty to mainland China, living donors were the source of nearly 50% of all kidney transplants in Hong Kong. Since 1997, transplant candidates have traveled to China to purchase kidneys, and the number of living donor transplants in Hong Kong has fallen to only 15 to 20% of all kidney transplants performed there (H.K. Chan, Hong Kong Transplant Registry, personal communication, September 4, 2006). The relative ease with which Israeli kidney transplant candidates, until recently, traveled abroad to purchase kidneys has been accompanied by a reduction in living-related donation in Israel itself (T. Ashkenazi, Israeli Ministry of Health, personal communication, May 7, 2006).

As nephrologists, we do not savor the impact that a vending system could have on our work and our relationship with our donor patients. The evaluation of donors, both medical and surgical, is replete with clinical nuances. Careful assessment of risk and donor education are at the core of donor evaluation (15). The decision to progress with donation, although often clearcut, may require refined clinical judgment by the medical team and critical thinking by the donor. The inclusion of major financial rewards for donation could well place tremendous pressure on transplant doctors to act against their best medical judgment. It is not difficult to imagine such scenarios: Might a donor surgeon, faced with a kidney with multiple vessels, elect to perform nephrectomy when he or she might otherwise have declined to do so because of the knowledge that the donor desperately needs the vending money? Might a nephrologist feel similarly pressured to approve a donor with mild hypertension, borderline proteinuria, or a history of kidney stones? Medical decision making is already difficult enough without its distortion by large financial rewards.

One of the arguments that repeatedly is made in favor of a vending system is that the current altruism-based system has stagnated and is impotent to address the burgeoning shortage of kidneys. We share the legitimate concern that lives are being lost while patients wait for a kidney (16). That concern in itself does not represent an argument in favor of vending, because it is quite unclear that a vending-based system would be effective and it could well be destructive (14). It is no longer true that the rates of deceased donor organ donation are static. To the contrary, the 3-mo average deceased kidney donation rate has risen 29% since January 1, 2001, and these increases have largely reflected increases in recovery of kidneys from standard criteria donors. Matas quotes Sheehy *et al.* (17) to contend that "even if every potential donor in the United States became an actual donor, there still would be a shortage of kidneys." This analysis, however, was limited to candidates for donation after brain death. It did not take into account multiple innovative endeavors to increase other sources of donor organs. These include living donor exchange (18), intended candidate donation (19), desensitization protocols for positive cross-match– and blood group–incompatible pairs (18), increased use of donors after circulatory determination of death (20), and increased use of extended-criteria donor kidneys (21). In the United States, perhaps the most promising endeavor of all is the so-called "Organ Donation Breakthrough Collaborative," whereby the best practices of the most successful organ procurement organizations are disseminated to less effective ones. An unprecedented impact on rates of deceased donation, from both extended- and standard-criteria donors, already can be recognized following the effort of the collaborative (22), and wait-list mortality rates seem to be falling. In 2004 alone, there was an increase in the number of deceased donors by 11% (23), and this trend is continuing (22). It is not "pie in the sky" to look forward to a reduction in the waiting list to acceptable levels if we continue to invest our best efforts, resources, and ingenuity. All of these new endeavors expand and exploit the altruism that has been the driving force of our success to date. They build on what we know rather than endanger what we have achieved. They do not reflect "lack of imagination" (2) or "doing nothing more productive than complaining" (3) as some eminent critics of our current system have suggested. We are unconvinced by Matas's somewhat blithe contention that they could flourish simultaneously with a vending system.

The general public is rightfully sensitive to any hint of injustice or malfeasance in our national transplant system. They are entitled to be, because they are not only the recipients of organs

but also the source. The past two decades have seen organ transplantation become one of the great medical benefits to humankind. For this to happen, an extraordinary degree of trust has developed between the public and their transplant teams that must not be taken for granted. Kidney vending might seem like a tempting solution to the organ shortage, but like the Trojan horse of old, once we permit it within our gates, we may find that it brings destruction and not relief. We believe strongly that a bright future for organ transplantation requires that we foster altruism and not stifle it.

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