Transplanting HIV Positive Organs Into HIV Positive Patients

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It would be refreshing to critique an organ donation plan that would increase supply without simultaneously violating ethical constraints. The law of supply and demand has imposed unforgiving rules on solid organ transplantation. As a result, there has been a flurry of activity aimed at the problem. Unfortunately, efforts to date have been disturbing in a number of ways.

First, there were asystolic protocols, characterized by ethicist Renee Fox as "an ignoble form of cannibalism." In these protocols, the "dead donor rule" (i.e., organs may only be taken from patients who have died; patients may not be killed to allow for organ procurement) was challenged by a "gerrymandered" definition of death (two minutes without a heartbeat). That definition, not new to transplantation, was initially maligned (the University of Pittsburgh Protocol in the mid 1990s, for example), but has now, with minor changes, been accepted by many. The engendered confusion inhabited contingent efforts to retrieve organs from anencephalic infants. Donors who were dying and donors who were dead were thus treated the same. An increase in supply occurred, but at the expense of donor dignity.

In other ways—at least in its early stages—living, adult liver transplantation stumbled over ethical hurdles of its own. The technical "learning curve" was complicated by the determination of optimum graft size. Estimating volume so that donor and recipient had enough liver tissue to survive after surgery was, to say the least, tricky. As a result, in some centers, recipient need trumped the long honored "primum non nocere," or first do no harm. Organ supply again increased, but donors were again harmed. Some donors ultimately required liver transplants, and others died as a direct result of donation.

Recently, market forces have been suggested as a critical supply-side component in the organ donation equation. They have begun to "re-intrude" themselves on an enterprise that has heretofore valued covenantal giving. Will there be an ethical downside to modest reimbursement for donation? In India, paid donors' quality of life has been poor and "middlemen" brokering transplant deals can make more than donors.
The need for more organs will not go away. Indeed, need is likely to intensify with each passing year. As the technique of medicine improves (more people living longer), and certain disease populations increase (Hepatitis C-induced liver disease, for example), the crisis will become more critical. As a result, the call for new programs to increase donors will continue.

July 15, 2004, brought a unique proposal to the organ supply debate: transplanting HIV positive organs into HIV positive recipients.\(^1\) Since HIV patients are living longer in the current era of Highly Active Anti-Retroviral Therapy (HAART), and since their risk for organ failure from associated diseases and treatments is substantial, they can benefit from solid organ transplantation. Individuals infected with HIV who are co-infected with Hepatitis C are but one example.\(^ii\) Prevalent statistics for this specific co-infection put the rate as high as 92%. The survival gains made in this population as a result of HAART are more than offset by two problems resulting from Hepatitis C. First, the progression of liver disease is accelerated, and second, patients do worse with standard therapy for Hepatitis C. The increased occurrence of cirrhosis and liver mortality that results can only be mitigated by transplantation.

What ethical issues, however, lurk beneath the surface of this proposal? The legislation passed in Illinois that would permit the policy change has been signed into law. The decision has been hailed as one way to expand the base of potential but scarce donors. The claim of lifesaving therapy without an ethical downside seems too good to be true. Specific questions must be answered. Are recipient risks, including graft-transmitted viral resistance and deterioration from immune suppression, factored into the proposal? Is ‘redundancy’ so built into the process that it will minimize the risk of ‘big’ mistakes, such as HIV positive organs being given to patients who are not HIV positive? Is there adequate safety oversight? Are further assaults made on the definition of death and donor dignity?

Potential viral resistance has been dealt with appropriately. The donors would be individuals who have not received HAART therapy, and therefore would not transmit resistant viral strains. Recipients are also carefully chosen based on T cell counts (100 mm\(^3\) for liver recipients, 200 for kidney) so that they can safely tolerate immune suppression. Informed consent is explicit both in regards to the source of the organs as well as the innovation’s ‘infancy’ so-to-speak, so that recipient dignity is protected. No overwhelming technical or medical hurdles have appeared.

What about the dire possibility that an HIV positive organ may be transplanted into a patient who is not infected with HIV? Redundancy has been built into the process so that ‘sign-offs’? (note the plural) in the blood bank make such an adverse event most unlikely. The program is even designed to stratify HIV positive patients who are in need of a transplant by MELD score, a standard that frees allocation decisions from social valuation.\(^3\) Patients on the waiting list for solid organs will not be harmed, for they simply could not receive the HIV positive organs.

Is the operating team unnecessarily exposed to the risk of viral transmission? The current generation of surgeons has matured in an era that frequently treats patients with transmissible diseases (both HIV and Hepatitis C), and therefore has been ‘schooled’ in universal precautions. The number of transplants that will result from this innovation will probably be small, and the risks, which have been \textit{de rigeur} for an entire generation of healthcare personnel, are not prohibitive.
The transplantation of HIV positive organs to HIV positive patients is not a panacea for the ongoing shortage of organs. The sponsors of the program have made no such claim. Rather, it will be small in scale. It should benefit individuals with HIV/AIDS who need organs and have otherwise reasonable viability. I suspect that asystolic criteria for the definition of death will still be applied, a persistent and serious issue, but in every other way, the model takes the requisite ethical concerns seriously. In so doing, it represents a refreshing change in a troublesome ethical arena.

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