Organ transplants: are they ethical?

Many people believe that health spending should be devoted to primary health care, rather than to such spectacular and expensive short-term life-saving procedures as transplants

by Francisco Vilardell

The scene of the painting illustrated here is Damascus in the Third Century A.D. Two brothers, both physicians, are transplanting the leg of a dead black man into a white man dying with a crushed leg. The transplant operation was apparently successful, and is known in the Christian world as the miracle of Saint Cosmas and Saint Damian. The social and ethical implications of this picture are obviously manifold, but the World had to wait 17 centuries for the demonstration by Alexis Carrel in the 1920s that visceral implants were feasible—the first step towards what has now become an important part of therapeutic medicine.

The first successful kidney transplant was done in 1954 and the earliest liver and heart transplant operations took place in 1967. Kidney transplantation has been established as a regular procedure, with sizeable cost-benefit advantages over continuous dialysis. But both heart and liver transplant programmes, while increasing enormously in numbers, still await confirmation of their risk-benefit importance by careful studies. Other inert or live tissues are also being transplanted such as corneas, bones, cardrums, bone-marrow, lungs, the pancreas and skin. Every year 14,700 kidney transplants take place, while the total number of liver and heart transplants exceeds 3,000 each and is expanding rapidly. Short-term survival rates are satisfactory for kidneys, heart and liver transplantation, but long-term results, both from the clinical and psychological standpoint, are still lacking; all the same, a five-year survival rate of 60 per cent is well within reach both for liver and heart transplants.

In addition to the difficult technical, legal and scientific problems related to transplantation, many questions arise about the ethical relevance of the procedures involved, and these have been answered only in a partial and uncertain way. Although there is a growing consensus that organ transplantation is not only morally per-
possible but even desirable, important reservations have been voiced about the ethics of some vital factors related to the procedure, such as the definition of death, the circumstances of organ retrieval, and the appropriateness of investing very large sums in order to treat very few, when such expenditure could possibly be used more profitably for the benefit of larger groups of individuals.

The cost of single-organ transplants, such as the heart or the liver, may vary considerably between US $45,000 and $120,000. Many who believe that the principal investment in health in the future should be devoted to primary health care and immunization programmes rather than to spectacular and expensive, short-term life-saving procedures, may wonder whether the money might not be better spent in immunizing, let's say, hospital workers who are at risk of infection with the hepatitis B virus. About 450 health workers could be fully immunized against such a potentially dangerous infection for the price of a single liver transplant procedure, regardless of the outcome.

In spite of these objections, it is evident that transplant procedures are here to stay: their advocates also point out that society has no qualms about spending huge amounts of money on renal dialysis, the long-term care of patients with cirrhosis of the liver, or the maintenance of unfortunate children with chronic and spinal diseases. One of the very few cost-benefit studies so far made on liver transplants has shown that caring for a patient with incapacitating, terminal liver disease may cost as much as $45,000 per year of a very precarious, low quality life—a sum in much the same range as the cost of a transplant.

Apart from the economic issues, there are other important ethical problems involved in transplantation. Organ donations of renewable tissues such as the bone marrow and of the kidneys from living persons are common procedures today. Commercialisation of organ donation is a real danger, and some alarming reports have been published about flourishing international networks organized for the buying, selling and distribution of organs. A kidney may sell for $3,000 to $7,000, and money lenders have even permitted debtors to repay them by giving them power to sell their kidney! Commercialism is not only confined to these blatant cases; it may operate in much more subtle ways such as “buying” priority in transplant waiting lists.

A recent conference on “Health policy, ethics and human values” convened at Noordwijk, Netherlands, by the Council for International Organizations of Medical Sciences (CIOMS) in collaboration with WHO, strongly recommended the banning of payments of any kind for human tissues or organs removed from any living or dead person. Fortunately, legislation now enacted in 39 countries, as well as declarations by the Council of Europe and the World Medical Association, will probably put an end to such disgraceful practices.

On the other hand, the use of cadaver organs raises serious ethical points in relation to the definition of death and seeking consent for donations. Since visceral transplants (kidney, heart, liver) require an intact blood flow for as long as possible to avoid deterioration of tissues, “brain death” has to be used as a criterion for organ retrieval instead of such classical signs as the cessation of respiration and heart beat. However, brain death alone is not considered a sufficient criterion in some countries such as Japan, where transplant procedures of this sort cannot be readily undertaken.

Transplant programmes have grown without a corresponding increase in organ donations, and the gap between the number of those who have such operations and of patients eagerly hoping to benefit from them is ever widening. If selection for transplantation among those who are waiting must be made, it should be equitable, and should be based on medical criteria and not on personal circumstances such as the patient's importance to his or her relatives, his significance to society or his ability to pay. Transplant programmes need to be efficient, and maintaining high standards may mean curbing the growth of transplant centres which today are proliferating in many countries in a rather uncontrolled way.

As probably less than half of the adult population is willing to donate their own organs, educational programmes involving both the public and the health professionals should be undertaken to provide for more donations. Each society has to decide what procedures are justified and for whom. The decisions may differ considerably from one area of the world to another, according to needs and in keeping with social and religious beliefs. Transplant operations aimed at saving the lives of a few should not be done at the expense of many others who also need urgent health care; and, on the other hand, governments should not restrict existing organ transplant programmes in the interest of general cost-containment policies if this means withholding from people a chance to live. Let us hope that, with rapidly advancing technology, long-term observation of patients and the establishment of ethical guidelines, some of these difficult dilemmas may find more generally acceptable answers.

As Albert Jonsen, the American specialist in medical ethics, has so aptly written: “The value of rescue derives from the quality of future life saved, not from the fact that death has been repelled.”