EDITORIAL

Ethical dilemmas in living donor liver transplantation

A S SOIN

Liver Transplant and Hepatobiliary Surgeon, Department of Multiorgan Transplantation, Sir Ganga Ram Hospital, Rajinder Nagar, New Delhi 110060, India. e-mail: absoin@nde.vsnl.net.in

Liver transplantation is accepted worldwide as the only cure for terminal liver failure. Although the recent tragic death of a liver donor at a hospital in Delhi underlines the need for caution, a knee-jerk reaction to liver transplantation or liver donation is inappropriate.

In Asian countries where cadaveric donation is practically non-existent, living donor liver transplantation (LDLT) is the only viable way of performing liver transplants in reasonable numbers to treat patients with end-stage liver disease. However, several ethical issues need to be addressed before a hospital embarks on a LDLT programme and indeed, before every such transplant.

The most serious objection to LDLT is the violation of the principle of non-maleficence, or to do no harm. The donor is at risk from a lengthy and potentially dangerous surgical procedure without accruing any health benefit. It is unethical to perform LDLT at a centre with sub-optimal facilities or expertise. The minimum requirements to start LDLT should be set out by the Indian Society of Organ Transplantation, ratified by established foreign teams and followed rigidly by all new centres.

Donor issues: coercion, consent and acceptable risk

There is concern about whether live donation can ever be without emotional or financial coercion. While emotional pressure has been more or less accepted or overlooked, financial incentive is illegal. Although donation should be motivated only by altruism, the real reason behind it is difficult if not impossible to determine. Some have lobbied for paid donation but the transplant community at large has been strongly opposed to it due to the danger of abetting exploitation of the under-privileged.

If the family of the prospective recipient is considered to be one ailing unit, donation by one of its other members (a first-degree relative or the spouse) may be justifiable since the family accrues a benefit for a calculated risk. However, this argument cannot be extended to unrelated donation.

Genuine informed written consent is central to the safe and optimal use of LDLT. However, even if every detail is given, the understanding of prospective donors will vary with their level of awareness, social and educational background. An overzealous and detailed description of possible complications can be misconstrued, putting off donors needlessly due to ill-founded fears and denying the recipient a chance to live. While we explicitly inform all our prospective donors (and their kin) about the mortality and major morbidity, we tailor the details of the explanation according to the perceived level of their understanding.

Some centres take informed consent in two sessions, spaced apart, to enable the donor and family to ponder over the pros and cons without time constraints (1). Although we do not do this in two defined sessions, our policy is to inform the donor of all possible consequences over three–four counselling sessions in the outpatient clinic, and then take informed written consent before the operation.

To avoid bias, it has been suggested that donor evaluation be done and informed consent be taken by a physician who is not from the transplant team (1). However, we believe that only a doctor from the transplant team can evaluate and inform the patient with the correct perspective and should be the one assigned this task in good faith. Detailed psychological testing is essential to ascertain

the donor's willingness to donate the organ free of coercion and also enhance his/her understanding of the various psychological issues. Finally, the relationship between the donor and the recipient, and the non-coercive nature of the donation must be confirmed by a government-approved, non-partisan authorisation committee before the transplant is permitted.

It is well established that liver donation is safely possible because of two unique qualities of the liver—reserve and regeneration. Due to its enormous reserve, a person is able to function normally with as little as 25% of the liver. Within a few weeks, the liver actually regenerates to its normal (pre-removal) size (2).

Still, in spite of careful preoperative work-up and the best surgical techniques, there remains a very small risk to life (0.3%) from donor hepatectomy (3). The risk is higher in a right lobe donation than in a left lobe one. The risk of donor hepatectomy may be higher than non-donor hepatectomy since removal of the diseased liver leaves behind much more functional liver than does a donor hepatectomy. A small risk is expected in any major surgery. This risk may seem justifiable for the family in which a terminally ill person is restored to normalcy. However, there remain detractors from this view.

Recipient issues: use of scarce resources and deciding priority for transplant

Even when cadaveric donors are available, there are ethical dilemmas over the use of a scarce national resource for patients who may have inflicted the primary disease or a co-morbid condition upon themselves (alcohol- or paracetamol-induced liver failure), those who may not have prolonged survival after transplantation (those with hepatocellular carcinoma or AIDS), those who may not be 'useful' working members of society (elderly recipients), and those who are not likely to have good graft survival (those with recurrent hepatitis C). The successful use of partial livers obtained from living donors can reduce waiting periods and mortality, and also offer a choice of transplantation to the above categories of patients who may otherwise be deemed to be low priority candidates due to societal or ethical considerations. In this way, they do not compete for the limited national pool of cadaveric donors. However, whether healthy donors should be put to risk to benefit this medically sub-optimal group of recipients is open to debate. Most centres would accept this risk.

Recommendations

- The first priority of the transplant team should be to ensure the well-being of the donor and exclude a person from donation if he/she is not an optimal candidate.
- At the hospital level, detailed psychological assessment and an interview with an impartial authorisation committee are essential to enhance the donor's understanding of the various psychological issues, confirm the relationship of the donor with the recipient and ascertain the donor's willingness to donate free of coercion. Detailed written informed consent must be signed by the donor before surgery.
- All recipients considered for compassionate transplants outside the accepted clinical criteria should be approved by the hospital's ethics committee.
- A regular medical audit should be routine in all hospitals. All centres should send all donor data to donor registries at the national and international levels.
- The State and National Departments of Health should empower the Indian Society of Organ Transplantation to prepare LDLT guidelines in concordance with international norms, which must be rigidly followed by all centres. These should cover the minimum requirements for a team to perform LDLT; maintenance and submission of detailed records of recipients and donors for all transplants; unrelated and non-directed donation; donor compensation and have a definition for acceptable donor risk.

References

1. Singer PA, Siegler M, Lantos J, *et al*. Ethics of liver transplantation with living donors. *N Engl Med J* 1989;**321:**620–1.
2. Soin AS. Current status of living donor liver transplantation. In: Chattopadhyay TK (ed). *GI Surgery Annual*, Vol. 9. Delhi: Indian Association of Surgical Gastroenterology, 2002:71–100.
3. Surman OS. To the editor. *N Engl J Med* 2002;**347:**618.