Shortage of organs for transplantation

Living donors should be used more often

EDITOR,—Celia Wight and Bernard Cohen's editorial discusses the report by the British Transplantation Society's working party on organ donation.^{1 2} In addition to trying to increase the donation of cadaver organs we should give much more attention to the use of living donors. The survival rates of grafts from living unrelated donors are equivalent to those of grafts of mismatched haplotype from living related donors and are superior to those of cadaver grafts in the short term.

Only 8.5% of grafts currently transplanted in Britain are from living donors (2.6 per million population); this compares unfavourably with figures from the United States (20%) and continental Europe (10%). If we were to increase live donation to the level in Norway (40%, or 17 per million population)³ the accrued overall increase in the half life of a transplanted kidney would probably be considerably higher than currently seems possible with all other procurement procedures. The use of living related donors has been an integral part of the Norwegian programme since 1969 and has increased since the introduction of cyclosporin in 1983.

The Norwegians base their policy on the principle that unilateral nephrectomy is not harmful to a healthy person. They have performed over 1200 living nephrectomies, and no donor has died. Two donors have developed uraemia requiring a transplant; this occurred 12 and 15 years after nephrectomy. The programme accepts healthy elderly donors, and, though it accepts all relatives (and, since 1985, spouses), it does not accept altruistic donations that it believes are beyond the fringe of medical ethics.

Advice to authors

We receive more letters than we can publish: we can currently accept only about one third. We prefer short letters that relate to articles published within the past four weeks. Letters received after this deadline stand less chance of acceptance. We also publish some "out of the blue" letters, which usually relate to matters of public policy.

When deciding which letters to publish we favour originality, assertions supported by data or by citation, and a clear prose style. Wit, passion, and personal experience also have their place.

Letters should have fewer than 400 words and no more than five references (including one to the BMJ article to which they relate); references should be in the Vancouver style. We welcome pictures.

Letters should be typed and signed by each author, and each author's current appointment and address should be stated. We encourage you to declare any conflict of interest.

Please enclose a stamped addressed envelope if you would like to know whether your letter has been accepted or rejected.

Letters will be edited and may be shortened.

Britain has always concentrated heavily on cadaver transplantation, and it is interesting that the big transplant units have the lowest rates of live donation. I suspect that having a busy cadaver programme leads to complacency about accepting living donors.

Donation from living unrelated donors is more contentious. In Britain it is prohibited except by special permission. An acceptable example would be donation from a husband to his wife, where the motive is based on the emotional ties of both parties.

Transplantation of organs from living related donors is one of the few ways in which we have an opportunity to increase the number of transplants. The message is clear: such transplantation is achievable, is socially acceptable, and has minimum morbidity. Furthermore, it provides an opportunity to bridge the gap between the increasing waiting list and the number of grafts currently available.

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- 1 Wight C, Cohen B. Shortage of organs for transplantation. *BMJ* 1996;312:989-90. (20 April.)
- 2 British Transplantation Society. *Report of the working party on organ donation*. London: BTS, 1996.
- 3 Jakobson A. Live renal donation: a way forward? In: Johnson RWG, ed. *Transplantation 95, the outlook for transplantation towards 2000*. London: Royal Society of Medicine, 1995. (congress and symposium series 211.)

Human organs will remain superior to porcine organs

EDITOR,—I wish to make three points in relation to the editorial and news article on the possible use of transgenic pigs as donors of xenografts to humans^{1 2} and also to comment on the report of the Nuffield Council on Bioethics on this issue.³

Firstly, new developments in clinical transplantation have hitherto been tested rigorously with allografts in various species—in particular, dogs and monkeys. These experimental allograft models are probably accurate predictors of what is likely to happen with human allografts. The situation with xenografts is qualitatively different, in that the progression to human recipients will represent a far greater step into the unknown than has been the case with previous clinical applications. However successful the experiments with transgenic pig grafts donated to monkeys, nobody really knows how the field will develop until the first five to 10 xenografts have been transplanted into humans.

Secondly, some porcine organs, such as liver, are unlikely ever to be of value for clinical transplantation. This is because the necessary interactions between porcine proteins produced by the xenograft and the relevant human proteins might not occur efficiently. For example, will porcine fibrinogen (from a porcine liver xenograft) interact with GPIIb/IIIa on human platelets? If not, the recipients of porcine liver xenografts will develop a bleeding disorder because of operational thrombasthenia.

For the foreseeable future (and probably always) human organs will remain superior to porcine organs. This is for reasons of both physiological and immunological compatibility. It should therefore always be emphasised that por-

cine organs and tissues will be used only to meet needs that cannot be met by human donors. It is crucially important that the public is not lulled into a false sense of complacency on this issue.

The report of the Nuffield Council on Bioethics is essential reading for any group considering clinical xenografting and for national regulatory bodies throughout the world. Its suggestion for an international register to monitor progress and avoid duplication of errors is important.

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- 1 Bach FH. Transplanting porcine hearts to humans. *BMJ* 1996;312:651-2. (16 March.)
- 2 Dillner L. Pig organs approved for human transplants. *BMJ* 1996;312:657. (16 March.)
- 3 Nuffield Council on Bioethics. *Animal to human transplants*. London: NCB, 1996.

Editorial's comments on report were selective

EDITOR,—Celia Wight and Bernard Cohen's editorial on the shortage of organs for transplantation¹ encapsulates some of the main issues highlighted in the recent report on organ donation by the British Transplantation Society.² As a member of the working party, I am dismayed by the overall impression that this editorial may have given to colleagues working in intensive care and transplant coordinators through its selective discussion of some of the report's recommendations.

The working party recommended that reimbursement should reflect the true cost of a donor referral to a hospital so as to eliminate financial disincentives. Clearly, this is not the same as suggesting that financial gain could be used as an incentive for referral, which is contrary to the Human Organ Transplant Act 1989.

The editorial suggests that improved training techniques for the staff who approach families for consent and better detection of donors will increase the number of donors. However, the working party found that in general it is the consultant in intensive care who asks for consent from families; not surprisingly, three quarters of consultants stated that they were confident in their approach. In addition, 98% of intensive care units had comprehensive policies and procedures relating to organ donation and the identification of donors.

Although promoting organ donation is a priority, I suggest that any collaborative approach to enhance referrals of donors must take into account the unique diversity of factors that affect referral rates in Britain.^{2 3} The introduction of expensive educational packages should be based on independently researched need rather than commercial gain.

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- 1 Wight C, Cohen B. Shortage of organs for transplantation. *BMJ* 1996;312:989-90. (20 April.)
- 2 British Transplantation Society. *Report of the working party on organ donation*. London: BTS, 1996.
- 3 New B, Solomon M, Dingwell R, McHales S. *A question of give and take: improving the supply of donor organs for transplantation*. London: King's Fund, 1995.