PERSONAL PAPER

Three ways to improve the supply of cadaveric organs for transplantation

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In every country that practises transplantation there is a growing gap between organ supply and demand. In the UK and Eire the waiting list for renal transplants rose from 4000 in 1991 to 5600 in 1997[1]. Morgan[2] concludes that the supply of organs might at least be maintained by improved identification and management in critical care units and better public knowledge of organ donation.

From American sources it is calculated that, if all cadaveric organs could be retrieved, there would be sufficient to satisfy demand. Estimates vary between 28.5 and 56 cadaveric donors per million population[3,4]. In most European countries, the referral rate is static at around 15 donors per million population—enough for only a third of those on the waiting list—and the prevailing gloomy view is that we have reached a ceiling. In my opinion, however, three options for the UK have so far received too little attention.

CHANGE THE TRANSPLANT LAW

There is general agreement, endorsed by the WHO in 1991[5], that organs may be removed from a dead body provided that any consent required by the law is obtained and that there is no reason to believe that the person would have objected, during life, to removal after death. In most countries the opinion of the relatives is taken into account before such removal, this surrogate consent being necessary because very few potential donors express their wish to bequeath their organs for transplantation before they die. But some countries (France, Spain, Austria and Belgium) have adopted legislation that allows the removal of organs from a cadaver *unless* the person had objected to such removal before death. Where such 'contracting-out' legislation does not apply, the relatives must give permission for donation; but in contracting-out law, the relatives will be asked to corroborate the assumed approval by the recently dead person, if he or she had not recorded an objection on a central national computer. Since contracting-out legislation was introduced in Belgium in 1986, there has been a significant and sustained increase in organ donors, from 10 donors per million population (dpm) in 1985 to 22 dpm in 1997. Less than 2% of the population have registered their objection to such removal.

The Belgian law is a 'soft' version of contracting-out, allowing the doctors in charge of the potential donor to decide against removal of organs if they perceive that it would cause severe distress to the relatives; in fact less than 10% of Belgian families object compared with 20–30% elsewhere in Europe. Belgian intensivists have found the new law favourable to donation and the general view is that stress to the relatives is actually lessened by relieving them of the burden of making the decision on behalf of the deceased[6,7].

INCREASE THE NUMBER OF TRANSPLANT COORDINATORS

After confirmation of brain death, the management of the donor puts extra demands on intensivists: in addition to the psychological stress of confronting the death of a severely ill or injured patient, the delay of several hours before the donor transplant team arrives could deny that intensive care bed to an emergency patient who needs it. The transplant coordinator can help considerably by taking over care of the donor, arranging the attendance of transplant teams and the timing of the operation in theatre, and perhaps also interviewing and counselling the relatives.

In 1986 the Spanish department of health radically reorganized the system of transplant coordinators, increasing their numbers and expanding their responsibilities: currently every teaching and district general hospital with an intensive care unit has on its staff a transplant coordinator (a nurse, or an intensivist doctor) who is responsible to the employing hospital rather than to the regional transplant director (as in the UK[8]). These coordinators are also responsible for relations with the media, and they collaborate with the patients' associations, lawyers and coroners as well as with intensive care staff. Their main aim is organ procurement. The results of this has been a remarkable increase in cadaveric organ donation, from 5 dpm in 1985 to 31 dpm at present. This rise continues despite a steady reduction in the annual death rate from road traffic accidents in Spain; and Spain is practically the only country in the west which has seen a fall in the kidney transplant waiting list[9].

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The dramatic results in Spain seem to derive from radical change in the number and distribution of transplant coordinators, the existence of a 'soft' contracting-out law and the adequate provision of intensive care beds.

EDUCATE THE INTENSIVISTS

In countries that lack contracting-out legislation, consent of family members is a necessary step to organ donation, and family refusal accounts for 30% of the failures to donate in brainstem-dead intensive care patients identified as suitable for organ donation[10]. It is the intensivists who usually ask for organs. Their skill, sympathy and understanding are therefore clearly very important in determining whether the relatives will agree or not: the task is by no means easy in the stressful environment of an under-resourced intensive care unit. Nurses acknowledge that the request for donation is part of their general duties in these circumstances, but many feel the need for further training[11]. The perceived need for advice on how to handle this delicate situation, expressed by doctors as well as nurses, led to the development of the European Donor Hospital Education Programme (EDHEP), via Eurotransplant (based in Leiden) in collaboration with the University of Maastricht. Each EDHEP course is attended by 16 intensive care doctors and nurses, and is chaired by a clinical psychologist. The objectives are to improve communication skills and heighten staff sensitivity to the bereaved. Interactive exercises and videotapes encourage participants to examine their own feelings aroused by loss and separation. Delegates are taught how to deal with different grief reactions and participate in skills training with simulated bereaved relatives.

The EDHEP course is now available in many different languages and has been modified to meet national circumstances and cultures. It is enthusiastically endorsed by many European transplant teams and intensive care organizations, and has been objectively studied in the North West of England. Preliminary results indicate an overwhelmingly favourable response from intensivists, who gain confidence and feel better equipped with the skills to tackle the daunting interview concerning organ donation with acutely bereaved, grieving relatives.

OTHER SOURCES

Another area that has been little explored in the UK is donation by relatives (less than 10% at present). In Scandinavia and the USA, living related donor transplantation accounts for up to a quarter of all kidney transplants (and over half in Norway). Donation by non-related people is also gaining ground; and so too is 'organ exchange' between related donor recipient pairs where blood group incompatibility prevents consanguinous donation. Efforts to replace human organ transplants by xenotransplantation or use of implantable artificial organs are so beset with technical and social problems that we are unlikely to see their clinical application in the near future. Meanwhile, I would reject the nihilistic assumption that we have reached a permanent and unbridgeable gap between human organ supply and demand.

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