

The failure to propose live-donor transplants is bad practice

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Failure to propose a renal transplant from a live donor when there is an opportunity to do so is bad practice. In other words, offering this therapeutic option to a patient with advanced renal disease is a good practice which all nephrologists should follow.

Are we really doing the right thing when “we avoid the awkward task of requesting a live donor from amongst the donor’s close family and friends” or, on the contrary, are we preventing patients from exercising a right and also limiting the principle of patient autonomy by not informing them correctly? Is it ethical not to offer this treatment option when the evidence shows only too well that survival for a transplant from a live donor is greater than it is for one from a non-living donor?

It is a fact, already demonstrated in the 1990s and consolidated in recent times, that survival for transplants and patients, even when the renal transplant is from an unrelated live donor is manifestly greater in live-donor transplants than in the case of a kidney from a non-living donor.¹⁻⁴ More recent data from the UNOS registry shows that the likelihood of having a functioning transplant three years after transplantation is 89.1% for live-donor transplants compared to 79.42% for non-living donor transplants.⁵

The reasons which have been proposed to explain the greater survival of live-donor transplants include shorter ischaemia time and the absence of the haemodynamic alterations which are produced in the context of brain death. But a factor which has independently demonstrated a strong influence is the absence of dialysis or a shorter time spent receiving this therapy by the receptor, which means conditions are better for them to receive a transplant.⁶⁻⁸ In these cases better results for renal function and reduced transplantation-linked morbidity, matched by better quality of life and greater survival, are obtained.

If we focus on the data on donation and transplants in Spain for a moment, our country is in a privileged position with 34.2 donors per million people (pmp). As far as the characteristics of donors are concerned, there has been a progressive change in their profile. Over 44% of our donors are 60 or over and the main cause of death amongst donors is stroke (increasing from 39% in 1992 to 65.4% in 2008). This tendency is destined to become even more pronounced in coming years, owing to the drastic fall in road injuries, so that traffic accidents currently account for only 8.1% of the total number of donors in Spain.⁹

In 2008 a total of 2,229 renal transplants were performed, which is equivalent to 45 transplants per million people.⁹ According to data from the Spanish renal patient registry, the prevalence of terminal renal disease being treated by dialysis (whether haemodialysis or peritoneal dialysis) is 415pmp.¹⁰ If we take into account the fact that theoretically 22% of these patients could be candidates for a renal transplant, we need around 100 renal transplants pmp to cover demand, in other words, more than double our annual transplant figure. These figures are higher in the case of young receptors, given that, as we have mentioned above, the percentage of donors under the age of 60 is gradually diminishing.

This means that our waiting lists are dilated by a pool of young patients who sometimes have to wait several years for a transplant, with all the costs to social and family life and economic outlay that this implies. In view of these facts and, bearing in mind that waiting list time is a crucial factor in determining post-transplant outcome, in our opinion there is an urgent need to inform and propose live-donor renal transplants.

The following questions may arise in this context: living donor renal transplants offer advantages compared to non-living donor transplants, however we are performing a nephrectomy on a healthy person. Is this ethically acceptable? What is the risk we subject the donor to?

The answer to the first question is yes. Although the principle of doing no harm implies inflicting no deliberate harm and nephrectomy is a major surgical procedure, the

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incidence of complications is low and the benefit afforded, not only to the transplant patient, but also indirectly to everyone on the waiting list, exceeds the minimal risk the donor is subjected to.

A lot of research studies have been published on the complications which can arise in donors in the short term and they all coincide in finding that the percentage of complications related to the intervention ranges from 0.6 to 14% and that most of these are minor complications (although, as with any invasive procedure in medicine, there is a risk of death around the time of an operation, which is estimated to be only 0.03%).^{11,12}

With respect to the progress of donors in the mid-long term, a recently published study in the *New England Journal of Medicine*,¹³ involving 3,698 renal donors, concludes that the long-term health of donors is similar to that of the general population and that they have an excellent quality of life (measured by the validated SF12 and SF36 questionnaires). During an average follow-up period of 12.2 +/- 9.2 years, glomerular filtration (GF) was measured in 255 of the donors and it was established that 85% had a GF higher than 60ml/min/1.73m², which remained stable. Albuminuria and blood pressure rates were similar to those for the study control group and any rise was related to associated factors, such as an increase in body mass index and age. The results for different registries in Norway, the Netherlands, USA and Spanish groups coincide, whether in terms of the figures obtained or in terms of the good long-term outcome for donors.

Spain has a long live-donor renal transplant track record, although until the end of the 1990s living donor transplantation represented less than 1% of the total number of transplants performed. In recent years the different publications on donor safety and better transplant survival, as well as the generalized use of less aggressive surgical techniques (such as mini-lumbotomy or laparoscopic surgery), together with a progressive change in the mentality of teams, patients and the National Transplant Organisation (ONT) itself, have resulted in an increase from just over 2% of our transplant workload in 2004 to 7% in the past year, when a total of 156 live-donor transplants were performed. There are over 20 renal transplant teams which are prepared to perform this type of transplant, but few of them conduct more than five procedures a year, a sign that this therapeutic option has not yet taken off at the national level.

We need to remember that only four years ago, in a survey conducted amongst our professionals, in response to the question "Why do you consider the number of live transplants carried out in your centre to be insufficient?", 24.2% replied that there was a lack of professional awareness, 27% a lack of awareness on the part of relatives and patients, and 16.6% that the time spent on the waiting

list was acceptable.¹⁴ In response to the latter, we are able to supply a figure: the average time spent on a renal transplant waiting list is about 24 months. During those twenty four months a patient undergoes a treatment which, although it is true that it allows them to stay alive, causes significant deterioration in their quality of life and greater morbidity, compounded by a worse transplant response, which increases the longer the patient has been receiving dialysis. We trust that this lack of awareness amongst 24.2% of professionals will be reduced as much as possible in the following survey conducted on this issue, reflecting the good clinical practice which is a feature of our national health system, and that the 27% reticence shown by relatives and patients to this therapy will disappear following effective information and commitment on the part of professionals.

Live renal transplants offer clear individual and collective benefits. It has been demonstrated that live-donor renal transplant patients have a transplant that functions longer, which translates into better quality of life and a lower economic cost to society. This is more marked if the transplant is performed before starting dialysis treatment. Moreover, it increases the chances of waiting list patients receiving a transplant.

In view of the data we have discussed above, we all need to be aware of the real situation and promote this therapy insofar as possible. Through initiatives such as the launch of the SPANISH CROSSOVER DONATION PLAN (*PLAN NACIONAL DE DONACIÓN CRUZADA*),¹⁵ in which the first two interventions have been completed successfully, live transplant training courses have been organized for clinicians, surgeons and coordinators. Awareness of the procedure has been fostered amongst patients, professionals and society in general. These activities have been initiated, sponsored or supported by the ONT. These initiatives, together with an increasing group of professionals and patient associations, point towards a definitive push for live-donor transplants. During the first semester of 2009, highly significant increases in transplant activity have been recorded, especially in Andalusia and Catalonia, and all this leads us to think that by the end of the year the percentage of live donors will be close to 10%, implying that we are on the right track.

Failing to inform patients with terminal renal failure properly and avoiding offering live-donor renal transplants as an alternative is a bad practice, which prevents patients from exercising their right to autonomy and is detrimental to the length and quality of their future lives.

REFERENCES

1. Binet I, Bock AH, Vogelbach, Gasser T, Kiss A, Brunner F, Thiel G. Outcome in emotionally related living Kidney donor transplantation. *Nephrol Dial Transplant* 1997;12:1940-8.

2. Kaneku HK, Terasaki PI. Thirty year trend in kidney transplant. UCLA and UNOS renal Transplant registry. *Clin Transpl* 2006;1-27.
3. Felipe C, Oppenheimer F, Plaza JJ. Trasplante renal de vivo: una opción terapéutica real. *Nefrología* 2000;1:8-21.
4. Cecka JM, Terasaki PI. The UNOS Scientific Renal Transplant Registry-2000. *Clin Transpl* 2001;1-18.
5. The organ procurement and Transplantation Network. United Network for Organ Sharing (UNOS). Available at: <http://www.optn.org>. Last access: 14 July 2009.
6. Guirado L, Vela E, Cléries M, Díaz JM, Facundo C, García-Maset R. Registro de enfermos renales de Cataluña. ¿Por qué el trasplante renal de donante vivo da mejores resultados que el trasplante renal de donante cadáver? *Nefrología* 2008;2:159-67.
7. Mange KC, Joffe MM, Feldman HI. Effect of the use or nonuse of long-term dialysis on the subsequent survival of renal transplants from living donors. *N Engl J Med* 2001;10:726-31.
8. Domínguez-Gil B, Pascual J. El trasplante renal de donante vivo en España. Una gran oportunidad. *Nefrología* 2008;28(1):143-7.
9. Memoria de actividad de donación y trasplante 2008. Página Web de la Organización Nacional de Trasplantes. Available at: www.ont.es. Last access: 25 August 2009.
10. Registro español de enfermos renales. Informe 2007. Disponible en: www.senefro.org.
11. Matas A, Bartlett ST, Leichtman AB, Delmonico FL. Morbidity and mortality after living kidney donation 1999-2001: Survey of United States Transplant Centers. *Am J Transplantation* 2003;3:830-4.
12. Sommerer C, Morath C, Andrassy J, Zeier M. The long term consequences of living-related or unrelated kidney donation. *Nephrol Dial Transplant* 2004;4:45-7.
13. Ibrahim HN, Foley R, Tan L, et al. Long-term consequences of kidney donation. *N Engl J Med* 2009;5:459-69.
14. Álvarez A, Martín E, García A, Miranda B, Oppenheimer F, Arias M. Encuesta de opinión sobre la donación de vivo renal. *Nefrología* 2005;2:57-61.
15. Programa Nacional de Donación Renal Cruzada en España. Versión 0.8. Available at: www.ont.es.