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Benefits of Kidney Transplantation or Living Donation?

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Worldwide, transplants from living kidney donors represented 34 % of the 91 465 kidney transplantations in 2018.[1] Yet, in geographic areas without deceased-donor programs, living kidney donation represented the majority of kidney transplants.

Over the past 10 y, our understanding of the consequences of living kidney donation was transformed. Two independent studies evidenced an increased risk of end-stage renal disease (ESRD) for donors compared with healthy nondonors in Norway[2] and in the United States.[3] In addition, living kidney donation was associated with an increased risk of gestational hypertension or preeclampsia.[4,5] Consequently, risk factors for ESRD, in a subset of the general population[6] or in living kidney donors,[7,8] were identified, and ESRD risk calculators were developed. Based on these findings, guidelines were formulated to facilitate the evaluation and the care of living kidney donors.[9,10] The recent literature added a significant amount of evidence on the future risks for living kidney donors. Although all the guidelines acknowledge that the candidate to donation should be informed of the risks and benefits of donation, scientific evidence for the benefit of living kidney donation is lacking.[11,12] Reese et al[11] and Van Pilsum Rasmussen et al[12] both advocated for the consideration of potential benefits of donation for living kidney donors.

In 2018, Reese et al[13] compared 43 individuals who were turned down for living kidney donation to 128 living kidney donors at a single center. They found that being turned down for living kidney donation was not associated with quality of life, depression, or financial stress, compared with donors. There tended to be differences in qualitative assessment of quality of life.

The same year, Rodrigue et al[14] reported the evolution of psychosocial outcomes at 1, 6, 12, and 24 mo after donation in a population of 193 living kidney donors recruited between 2011 and 2013 at 6 different transplant centers in the United States. In this study, the incidence of new-onset mood disturbance (16%), fear of kidney failure (21%), body image concerns (13%), and life dissatisfaction (10%) was low. However, results from this study are presented as a stability of mood situation after donation compared with predonation. The study was not designed to evaluate potential benefits of living kidney donation, and the proportion of donors who were caregiver-partners was not evaluated.

In the present issue of *Transplantation Direct*, Van Pilsum Rasmussen et al[15] compared the evolution of caregiver burden and relationship quality between dyads of patient-partners and caregivers-partners after the initiation of dialysis and after renal transplantation. This study highlights the difficulty of including caregiver-partners in retrospective studies: of the 417 eligible patients with a caregiver-partner, only 86 caregiver-partners participated. The authors acknowledged that the limited number of participants and the retrospective design are limitations to this study.

The most prominent result is that caregiver-partners experienced significant improvements in their quality of life and relation after renal transplantation of the patient-partner. In particular, caregiving burden and sexual relationships returned to predialysis levels. These results suggest that kidney transplantation of the patient-partner is associated with a benefit for the caregiver-partner. Noteworthy, this study was not conducted exclusively among caregiver-partners who donated a kidney. Hence, the benefits of kidney transplantation on the caregiver-partner quality of life are not adjusted for living kidney donation. In particular, it is unknown whether changes in the quality of life of caregiver-partners who donated a kidney were different (after transplantation of their patient-partner) from the changes in quality of life of caregiver-partner who did not donate.

Beyond the balanced information of candidates to donation, between risks and benefits, the question of integrating expected benefits as a part of living kidney donor screening remains unanswered. To date, no guideline integrates the expected benefits as part of predonation evaluation. Yet, according to the results from this study, benefits seem tangible and support further research in a population of living kidney donors.[16] This is a first step toward deciphering the potential benefits of living kidney donation.

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