One Living Donor and Two Donations: Sequential Kidney and Liver Donation With 20-Years Interval


ABSTRACT

The shortage of cadaveric donor organs remains the critical factor limiting the use of organ transplantation. In this environment of organ shortage, living donor transplantation has emerged as a reasonable therapeutic alternative. Simultaneous kidney-liver transplantation from the same donor has been described. We report a case of right liver lobe transplant from a living donor who had donated his kidney to the same recipient 20 years prior.

CASE REPORT

Simultaneous kidney–liver transplantation from the same donor has been described for children1 and adults,2,3 but only these recent reports used the right lobe liver as a graft.

A 20-year-old man underwent a kidney transplant in 1984. The end-stage renal failure was caused by chronic glomerulonephritis. The donor was his older brother, who was HLA-identical and cross-match negative.

Twenty years later, this man had a diagnosis of liver cirrhosis (Child-Pugh B8 and MELD score 18) due to hepatitis C virus infection. A screening ultrasound showed a 2.5 cm hypoechoic nodule in segment VI of the liver. Upon computed tomography scan the nodule was 3.0 cm showing intense arterial enhancement. The α-fetoprotein was 31 ng/mL and renal function was normal. The immunosuppressive regimen at this moment was mycophenolate mofetil (MMF) and prednisone (PRED). A liver transplantation was definitive treatment for the hepatocellular carcinoma and cirrhosis. Intra-arterial chemoembolization was performed before transplantation as a bridge to the definitive therapeutic procedure.

His brother, who had donated the kidney 20 years before, asked us about the possibility of becoming a living liver donor. The donor was ready in 3 months, on July 27, 2004, we performed an adult living donor liver transplantation between the two brothers. The donor did not receive any transfusion during the operative and postoperative periods. The postoperative period was uneventful. He was discharged on the sixth day. He returned to his activities 25 days after the surgery.

The recipient received a right lobe graft that weighted 775 g, which means a graft and recipient body weight relation of 0.95%. During the liver transplant, basiliximab was used as induction immunosuppression, PRED dose was increased, and MMF was maintained. Tacrolimus (FK) was introduced on the 10th postoperative day. The recipient did not receive any transfusion during the hospitalization. He was discharged on the 21st day. Three months thereafter, FK was stopped and rapamycin (RAPA) was introduced due to its probable antitumor activity.

DISCUSSION

Donor safety is the most important issue related to living donor transplantation. Simultaneous kidney-liver transplant using the same living donor can represent an additional risk, especially for a donor of the right liver lobe. Today, the real risk for right lobe liver donation is unknown,5 and what could we say about this kidney-right lobe liver living donor? Sequential transplants using the same donor, especially many years later, may not represent an additional risk. Many series have shown that a renal living donor has a normal life for 25 years after nephrectomy.6 This case shows a good result for living donation of more than one organ from the same donor without exceeding the risks of both procedures for the donor.1–3

REFERENCES

5. Marino IR, Doyle HR: Living donor in urgent cases: ethical hazard? Liver Transplant 8:859, 2002