Simultaneous liver-kidney transplantation: a single-center experience in Korea

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Background: Simultaneous liver and kidney transplantation (SLKT) has been established as the treatment of choice for patients with concurrent end-stage liver and end-stage kidney diseases. The objective of this study was to analyze the nationwide incidence of SLKT in Korea and the outcomes of SLKT in a high-volume transplant center.

Methods: Databases of the Korean Network for Organ Sharing (KONOS) and Asan Medical Center from 2000 to 2019 were retrospectively reviewed to determine the incidence of SLKT.

Results: During 20 years from 2000 to 2019, deceased donor SLKT was performed for 38 cases in the KONOS database. The proportion of deceased donor SLKT was 0.6% (20 of 3,333) before adoption of model for end-stage liver disease (MELD) score, which was significantly increased to 1.2% (18 of 1,524) after the adoption of MELD score ($P=0.034$). In our institution, there were 11 cases of SLKT (two cases with deceased donors and nine cases with living donors). SLKT accounted for 0.2% (11 of 6,468) of total liver transplantation volume. During follow-up, five patients died due to hepatocellular carcinoma recurrence ($n=2$), infection ($n=2$), or unknown cause ($n=1$). The 1-year and 10-year overall patient survival rates were 90.9% and 81.8%, respectively.

Conclusions: Results of this study revealed that the incidence of deceased donor SLKT was very low. An increase of such incidence is not anticipated unless the number of deceased donors is markedly increased. Currently, sequential living donor liver transplantation and kidney transplantation with deceased or living donors are mainstays of transplantation rather than SLKT in our institution.

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