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SAFETY OF LIVING RIGHT LIVER DONORS AGED 45 AND OLDER : RISKS AND OUTCOMES FOR DONORS AND RECIPIENTS

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Background : The safety and viability of grafts from old aged donors remain unclear. This study aimed to compared donor and recipient outcomes in living donor liver transplantation (LDLT) using right lobe (RL) grafts from older donors (≥45 years, OD) versus younger donors (<45 years, YD).

Methods : LDLT outcomes using RL grafts from the OD group were compared to those from the YD group, both before and after propensity score matching (PSM).

Results : A total of 4,415 RL donors were analyzed, including the OD group (N=4,177) and the YD group (N=238), along with their corresponding recipients (N=4,415). Donor morbidity, including overall, major (Clavien-Dindo ≥3a), biliary, and vascular complications, were not showed in the OD group compared with YD groups. However, recipients of OD RL grafts showed significantly higher incidence of biliary stricture (9.2% vs. 6.2%; p=0.035), 1-year graft failure (5.5% vs. 1.1%; p=0.001), and reduced long-term graft survival (p=0.004) compared to the YD group. OD grafts were significantly associated with poorer graft survival in recipients with MELD score ≥20 (p<0.05). These outcomes were consistent after 1:3 PSM. Multivariate analysis identified OD grafts as a significant risk factor for 90-day biliary stricture and 1-year graft failure. No donor mortality occurred, and all donors fully recovered to their baseline activity levels.

Conclusions : LDLT using RL grafts from donors aged ≥45 years increased the risk of biliary stricture and early graft failure in recipients, particularly in those with MELD ≥20, while donor safety was not compromised. Careful donor-recipient matching is critical when considering older donors.

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