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## Outcomes Of Living Donor Liver Transplantation Recipients With High Model For End-stage Liver Disease Score Over 35: A Korean National Registry Study

Eun-Ki MIN<sup>1</sup>, Deok-Gie KIM<sup>1</sup>, Jae Geun LEE\*<sup>1</sup>

<sup>1</sup>Department Of Surgery, 연세대학교 세브란스병원, REPUBLIC OF KOREA

**Background**: Recent studies have reported comparable outcomes of living donor liver transplantation (LDLT) in patients with a high Model for End-Stage Liver Disease (MELD) score, predominantly over 25. However, the dearth of research concerning MELD scores over 35 and multicentric cohorts is of particular significance in a nation with limited deceased donor organs.

**Methods** : We conducted an observational study using a population of 3,918 LT cases from the Korean Organ Transplantation Registry. The survival outcomes of living donor liver transplantation (LDLT) recipients with MELD $\geq$ 35 (n=80) were compared with those of deceased donor liver transplantation (DDLT) recipients with MELD $\geq$ 35 (n=367), both in the entire and propensity-matched cohorts. Similarly, the outcomes of LDLT in MELD $\geq$ 35 were compared with LDLT in MELD<35 (n=3,471), including propensity-matching.

**Results** : 5-year survival was 84.2% in the LDLT recipients with MELD $\geq$ 35 group and 68.4 % in the DDLT recipients with MELD $\geq$ 35 (p=0.0057). Bile duct complication rate was higher in LDLT group (p=0.0011), while acute rejection and vascular complications were comparable between the groups. In the matched population, 5-year survivals were not different between the groups (p=0.13). Multivariable Cox analyses showed that recipient age was a risk factor for mortality in LT population with MELD $\geq$ 35. When compared to LDLT in MELD<35, 5-year survival was comparable in the LDLT in MELD $\geq$ 35 group, in both the entire cohort (p=0.22) and the matched cohort (p=0.27). Bile duct complication, acute rejection and vascular complication rates were similar between the two groups. Multivariable Cox analyses showed that low recipient BMI, HCC, refractory ascites, ICU hospitalization before LT, ABO incompatibility, old age donor and GRWR<0.8 were risk factors for mortality in LDLT population.

**Conclusions** : LDLT in MELD $\geq$ 35 showed comparable survival outcomes compared to both DDLT $\geq$ 35 in MELD and LDLT in MELD<35. The results suggest that a MELD score as high as over 35 per se should not be considered a contraindication to LDLT.

Corresponding Author : Jae Geun LEE (drjg1@yuhs.ac)