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The Impact Of MELD Score On Deceased Donor Liver Transplant Outcomes In Low Volume Liver Transplantation Center: A Retrospective And Single Center Study

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Background : In June 2016, the Model for End-Stage Liver Disease (MELD) score was employed in South Korea instead of the Child-Turcotte-Pugh (CTP) score. This study compared the outcomes of deceased donor liver transplantation (DDLT) before and after the MELD system application.

Methods : This retrospective study reviewed 48 patients who underwent DDLT for end-stage liver disease at a single tertiary referral center between January 2014 and December 2018. The patients were categorized into the pre-MELD (22 patients) and post-MELD (26 patients) groups. The demographics, postoperative outcomes, and overall survival time were evaluated between the two groups.

Results : The two groups had no differences in age, sex, ABO type, etiology for liver transplantation, CTP-score, operation-time, cold-ischemic-time, and amount of red blood cell transfusion, although their MELD score differed significantly (post-MELD group, 36.2 ± 4.9 ; pre-MELD group, 27.7 ± 11.8 ; $p < 0.001$). The post-MELD group has longer Intensive-Care-Unit stay (11.2 ± 9.5 vs. 5.7 ± 4.5 , $p = 0.018$) and hospital stay than the pre-MELD group (36.8 ± 26 vs. 22.8 ± 9.3 , $p = 0.016$). The mean follow-up time was 32.8 months, and the 1-year survival rate was lower in the post-MELD group (61.5% vs. 86.4%, $p = 0.029$). The 6-month mortality rate was higher in the post-MELD group (34.6% vs. 9.1%, $p = 0.036$).

Conclusions : After MELD allocation, patients with high MELD scores had increased DDLT and consequently required a longer recovery time, which could negatively affect survival. According to the experience of a small-volume center, these problems were related to both severe organ shortages in South Korea and MELD allocation.

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