16<sup>th</sup> SINGLE TOPIC SYMPOSIUM

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## Systemic immune-inflammatory marker of high MELD patients is associated with early mortality after liver transplantation.

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**Background** : The scarcity of deceased donor livers has led to the allocation of grafts to the most seriously ill patients with a high Model for End-stage Liver Disease (MELD) score, which resulted in a high mortality rate after deceased donor liver transplantation (DDLT). The aim of this study is to identify risk factors for post-transplant mortality and thereby reduce futile outcomes in DDLT.

**Methods** : Between 2013 and 2019, 57 recipients with MELD scores ≥30 underwent DDLT in our center. We retrieved data and identified the risk factors for 90-day post-transplant mortality. The perioperative clinical and laboratory parameters of patients who did or did not survive for 90 days were subjected to logistic regression analysis.

**Results** : The median MELD score of 57 recipients was 38 [interquartile range (IQR) 34-42). Among them, 12(21.1%) patients died within 90 days. Results of univariate analysis indicated that the differences in patient survival were determined by the amount of intraoperative platelets transfused, the presence of post-transplant septicemia, and systemic immune-inflammation index (SII), which was calculated as neutrophil x platelet / lymphocyte count at the time of listing with MELD scores  $\geq$ 30. Multivariate analysis revealed that an SII  $\geq$ 870 (x1,000,000/L) and post-transplant septicemia were independent risk factors for 90-day mortality. Twenty-two patients had SIIs  $\geq$ 870, and 13 of these patients had post-transplant septicemia. Of the 13 patients, 90-day mortality occurred in 10 cases. However, in 35 patients with SIIs <870, 90-day mortality due to post-transplant septicemia was recorded only in one patient.

**Conclusions** : In conclusion, a preoperative SII ≥870 in a patient with a high MELD score may be a significant risk factor for early post-transplant mortality. Since post-transplant septicemia in patients with high SIIs can lead to fatality, a more intensive effort to prevent infection is needed for patients undergoing DDLT carrying such risk factors to avoid futile liver transplantation.

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