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VALIDATION OF THE MEAF SCORE AND COMPARAISON WITH EARLY ALLOGRAFT DYSFUNCTION CRITERA ON PREDICTING 3 MONTHS GRAFT SURVIVAL

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Dear Sir,

We read with great interest the study of Pareja et al. (1) entitled: "A score model for the continuous grading of early allograft dysfunction severity", reporting a new score characterizing severity of early allograft dysfunction (EAD) so called the MEAF (model of early allograft function) score. This interesting score, which is calculated from bilirubin, INR and alanine aminotransferase levels observed within the 3 first post operative day (POD), is a continuous score grading from 0 to 10 reflecting the graft function, while most of previous score including the definition of EAD reported by Olthoff and al. (2), are only binary. In order to validate the proposed model we calculated the MEAF score in our population according to the reported formula. Between 2002 and 2014, 1297 liver transplantation were performed in our center with a median follow up of 41.4 months. Thirty two (2.5%) patients were retransplanted or died within the 2 first POD and were therefore excluded from the analysis. Of the 1265 remaining patients, the MEAF score could be calculated in 785 (62%) cases.

Median MEAF score value was 4.6 and a significant correlation with graft survival was observed (figure 1a). Notwithstanding, the capacity of a MEAF score ≥ 8 to predict 35months graft survival was inferior to presence of EAD (as reported by Olthoff et al.) as shown by ROC curve (figure 1.b).

Therefore, our data support the effectiveness of the MEAF score as a grading system of the severity of graft dysfunction. However, it is our opinion that this score has some limitations. First, it can't be calculated in case of graft or patient death within the 2 first POD. This major limitation, prevent comparison or analysis of liver transplantation efficiency between subgroup or population as most of patient with primary non function, requiring early retransplantation, were excluded. We suggest that patients in whom the MEAF score could not be calculated due to retransplantation or patient's death, should be attributed by default the maximum score (i.e. 10). Moreover, its formula required a calculator and therefore limits its utility in clinical practice. A more simple method of calculation, which could be easily used by physician, may be useful.

References:

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2- Olthoff KM, Kulik L, Samstein B, Kaminski M, Abecassis M, Emond J, et al. Validation of a current definition of early allograft dysfunction in liver transplant recipients and analysis of risk factors. Liver Transpl 2010;16:943-949.

Figure legends:

Figure 1 A- Graft survival according to MEAF score stratification. p value <0.001.

B- Comparision of three-months graft survival prediction with MEAF and EAD by

ROC curve

Figure 1 A- Graft survival according to MEAF score stratification. p value <0.001.
B- Comparision of three-months graft survival prediction with MEAF and EAD by ROC curve

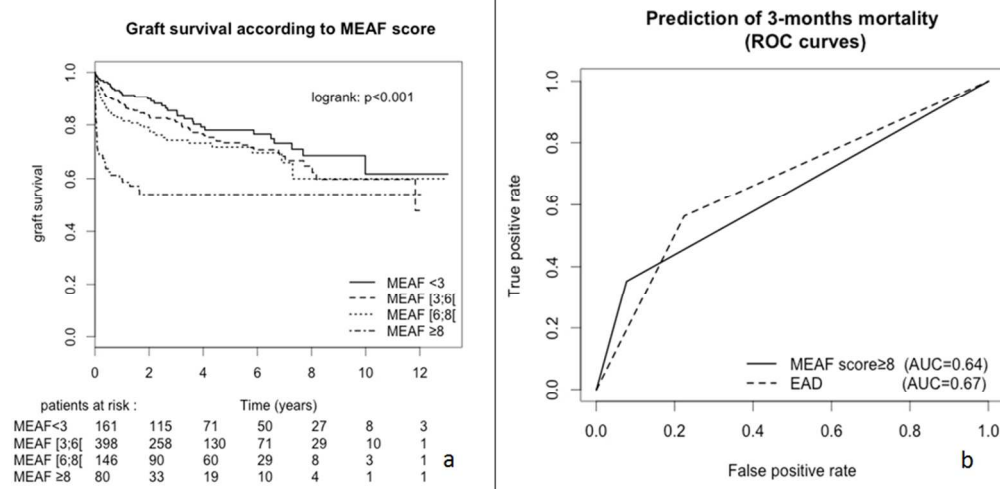275x135mm (96 x 96 DPI)