

Hepatology Highlights

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Model for end stage liver disease (MELD) is better than the Child-Pugh score for predicting in-hospital mortality related to esophageal variceal bleeding by Angel Flores-Rendon et al.

For many years the prediction of the outcomes of patients with cirrhosis relied on the use of the Child-Pugh (CP) score; however the scenario significantly changed after the introduction of the Model of End Stage Liver Disease (MELD) for organ allocation in liver transplantation in 2002. The main objective of prognostic models such as the CP and MELD score is to provide precise information in order to make an accurate prediction of survival in a specific patient with end-stage liver disease. These scoring systems must meet some requirements such as the full assessment of predictive factors of survival in a large group of patients taking into account all possible clinical variables, a prognostic model (an index that combines variables with independent predictive value that allows the estimation of the probability of survival for individual patients) that includes easily available parameters with strong predictive value and validation of this model in prospective series of patients with different etiologies and, preferably in different settings. Both the MELD and CP score meet these criteria in patients with cirrhosis. In the setting of acute variceal bleeding (AVB) prediction of survival and failure to control bleeding has been evaluated with clinical variables as well as invasive hemodynamic parameters. In fact, hepatic venous pressure gradient is perhaps the best predictor of short-term prognosis and failure to control bleeding in patients with AVB. However, the identification of readily, non-invasive obtainable variables that help predict outcome in AVB is more practical in the acute setting when trying to optimize resources.

Both MELD and Child-Pugh scores are accurate predictors of survival in cirrhotic patients with AVB.

In this issue, Flores-Rendon et al. assess the efficacy of the CP and MELD score in predicting failure to control bleeding and in-hospital mortality. They retrospectively evaluated 212 cirrhotic patients with AVB and found that neither the MELD score of CP were accurate enough in predicting failure to control bleeding. Both scores showed ROC values < 0.7 and were not significantly different. These findings contrast to those recently observed by the Mayo Clinic group (Bahmba, et al Gut 2008;57:814-20) where a MELD score ≥ 18 was a strong predictor of variceal re-bleeding within the first 5 days in cirrhotic patients with AVB. Another study from Barcelona (Abralde JG. J Hepatol. 2008;48:229-36) showed that CP class (but not MELD), systolic blood pressure at admission and etiology were the independent predictors of failure to control bleeding. The explanation for these disparities may be explained by a number of factors, such as analysis of a retrospective dataset, different patient population at different stages of the disease, other complications not collected in the dataset for such as infections, encephalopathy, refractory ascites, or hyponatremia. An important finding of Flores-Rendon et al. is the identification of both CP and MELD scores as good predictors of overall mortality in hospitalized patients which confirms previous data from other groups. Additionally the value of MELD as better predictor of mortality related to variceal bleeding is of importance and highlights the significance of the prognostic variables included in the MELD, mainly renal function which can deteriorate significantly in the course of AVB. The findings of Flores-Rendon help elucidate the good prognostic ability of the MELD score in AVB, however prospective studies with validation in other groups of patients are needed in order to better rely on the MELD score as a prognostic tool in this setting.

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