



AB109. SOH22ABS192. Increased MELD-Na and Rockwood Frailty Score are associated with increased hospitalisations in a national cohort of liver transplant candidates

Sinead Cremen¹, Gordon Greville²,
Mark Robinson², Tom Gallagher¹

¹Department of Hepatobiliary and Liver Transplant Surgery, St. Vincent's University Hospital, Dublin, Ireland; ²Department of Biology, Maynooth University, Kildare, Ireland

Background: Frailty is a clinical condition characterised by loss of physiologic reserve and increased susceptibility to stressors. The aim of this study was to establish the impact of frailty on a national cohort of liver transplant candidates and determine the molecular profile of these patients.

Methods: Patients were recruited and prospectively evaluated while undergoing liver transplant assessment. Clinical assessments included Liver Frailty Index (LFI) and Rockwood Frailty Score (RFS) and outcomes data including hospitalisations and waiting list outcome within 6 months. Serum samples from patients were analysed using mass spectrometry to assess the molecular profile of this cohort.

Results: A total of 91 patients were referred for assessment, with 57% [52] listed for transplant. Increased MELD-Na [odds ratio (OR) 1.176, 95% confidence interval (CI): 1.048–1.319, P=0.006] and increased RFS (OR 2.190, 95% CI: 1.014–4.732, P=0.046) resulted in an increased odds of hospitalisation within the first 6 months of listing for transplant. AUC analysis demonstrates that MELD-Na and RFS (area 0.828, 95% CI: 0.710–0.946, P<0.001), compared to MELD-Na alone (area 0.761, 95% CI: 0.619–0.903, P=0.005), were more accurate at predicting hospitalisations. Frailty as assessed by the RFS was associated with significant

changes in serum proteins related to complement and coagulation, including fibrinogen, von Willebrand factor, and heparin cofactor 2.

Conclusions: Frailty is an important health determinant in patients awaiting liver transplant. This study adds objectivity to what was previously a nuanced aspect of patient selection and implicates alterations in blood coagulation pathways in frail patients. By incorporating the RFS into the liver transplant assessment, patient identification for transplant could be enhanced.

Keywords: Liver; mass spectrometry; MELD-Na; outcomes; Rockwood Frailty Score (RFS)

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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