AB110. SOH22ABS195. Sarcopenia is an important predictor of frailty in patients awaiting liver transplant

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Background: Frail patients are at increased risk of mortality and hospitalisation prior to transplant. Over the past 20 years, obesity rates have greatly increased, and there are larger proportion of obese patients undergoing transplantation. The aim of this study was to identify if body composition impacts frailty in patients awaiting liver transplant.

Methods: Patients were recruited and prospectively evaluated while undergoing liver transplant assessment. Clinical frailty assessments included Liver Frailty Index (LFI), Fried Frailty Index (FFI) and Rockwood Frailty Score (RFS). Body composition was assessed from CT images using Slice-O-Matic 5 software (TomoVision, Canada). The programme then calculated adipose tissue, skeletal muscle area and the skeletal muscle index (SMI) (total abdominal skeletal muscle area cm^2/height). Sarcopenia has been defined as an SMI less than 50 cm/m^2 for men and 39 cm/m^2 for women.

Results: A total of 55 patients were assessed for transplant and had a suitable CT carried out between the collection period. Forty-two percent [38] were sarcopenic. SMI did not correlate with clinical frailty scores (FFI r=–0.088, P=0.522, RFS r=–0.037, P=0.785). Increased visceral adiposity had the highest associated with frailty, significantly correlating with increased LFI (r=0.334, P=0.003), FFI (r=0.287, P=0.011), RFS (r=0.297, P=0.008), TUG (r=0.354, P=0.002). Hepatic encephalopathy [odds ratio (OR) 211.683, 95% confidence interval (CI): 3.069–44.473, P<0.001] and visceral adipose tissue (OR 1.009, 95% CI: 1.001–1.017, P=0.031) significantly increased the odds of frailty using the LFI.

Conclusions: Increased volume of adipose tissue was significantly associated with multiple clinical frailty assessments. This study adds to our understanding of factors affecting the development of frailty in these cohort of patients.

Keywords: Frailty; liver; sarcopenia; skeletal muscle index (SMI); transplant

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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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