Routine Liver Frailty Index Assessment as a Part of Pre-Liver Transplantation Evaluation: Feasibility and Outcomes

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Introduction

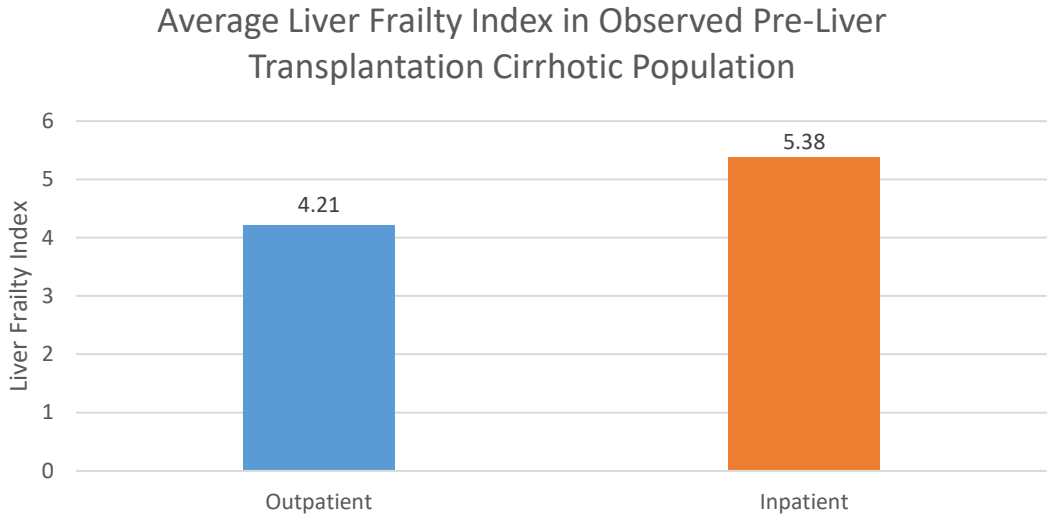
- Frailty is a well-established risk factor for poor outcomes in patients with cirrhosis awaiting liver transplantation (LT).

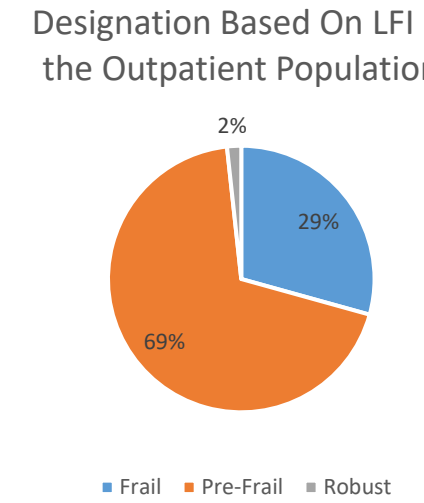
Aims

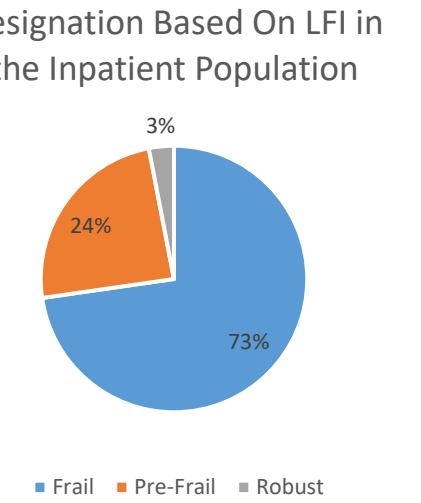
- We assessed feasibility of routine use of Liver Frailty Index (LFI) for pre-transplant evaluation.
- The LFI is an approximation of frailty in cirrhotic patients determined by evaluating indicators of muscle function – hand grip strength, rising from a seated position, and balance testing (Williams et al 2021).

Methods

- 91 patients (58 from the outpatient setting and 33 from the inpatient setting) were included in the study.
- Trained dieticians implemented the initial LFI assessment (which entailed acquiring the average of 3 handgrip strength values, a single time value required to perform 5 chair stands, and time values required to hold each of a side, semi-tandem and tandem balance position).
- The LFI score and accompanying designation (frail, pre-frail, and robust) were obtained using the University of California at San Francisco (UCSF) LFI calculator.







Results

- The predominant etiology of cirrhosis was alcohol-related (inpatient 63.64% and outpatient 34.48%), followed by non-alcoholic steatohepatitis.
- Inpatients had higher MELD Na score (26.45±6.31 vs 15.97±6.73), had significantly higher prevalence of ascites (90.91% vs 51.72%), and more likely to be frail (5.38±1.13 vs 4.21±0.66, p =<0.0001).
- The prevalence of Frail, Pre-frail, and robust group as assessed by LFI was 72.73%, 24.24% and 3.03% in the inpatient group as compared to 29.31%, 68.97%, and 1.72% in the outpatient group.
- The median hospital stay in the groups were 18.5, 6, 6 days in the Frail, pre-frail, and the robust groups, respectively.

Conclusions

- In this pilot, we demonstrated that routine use of LFI in the pre-liver transplantation evaluation of cirrhotic patients is feasible due to the interdisciplinary collaboration between the Hepatology team, physical therapists, and nutritionists.

References

- Williams FR, Milliken D, Lai JC, Armstrong MJ. Assessment of the Frail Patient with End-Stage Liver Disease: A Practical Overview of Sarcopenia, Physical Function, and Disability. *Hep Com* 2021; 5(6):923-927.