

Answering Reviewers:

Dear Reviewers,

Please see the following answers to the review questions and concerns.

(1) Science editor:

This is a very interesting article discussing the impact of cirrhosis on STEMI and cardiogenic shock. The authors conclude that early PCI improves outcomes and reduces cost, while early ECMO does the opposite. This data is very relevant, and the prevalence of cirrhotic patients with MASH is bound to increase dramatically in the next couple of decades. The review was positive, and reviewer 1 pointed out a few corrections that need to be taken care of. Personally, I believe this is a large subject and 32 references is not enough - the authors should review more papers on this subject. Also, the tables are not good - they need to be improved and submitted in file format and not an image format. I would suggest revision of the manuscript, with a point by point answer to reviewers and editors.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade B (Very good)

The tables are submitted in a file format in a separate document. The system was not allowing me to submit a manuscript, so the full revised manuscript is also under a supplementary file. We have added additional references to support our review of the literature and our conclusions.

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Dar and colleagues aimed to identify the factors that increase inpatient mortality, length of stay, and total hospital charges in patients with liver cirrhosis compared to those without liver cirrhosis. The topic is critical in the field. The title reflects the main subject of the manuscript. The abstract reflects the work described in the manuscript. The manuscript appropriately cites the latest and essential references. The presented figures are clear. Language is good. However, some points should be considered. Comments: - Abstract: Some abbreviations were presented without being spelled out. Would you please spell out firstly any abbreviation? - Abbreviations: any used abbreviation should be spelled out firstly. Then no need to mention the spelling out and its abbreviation again after the first time. Example; page 6: PCI and ECMO have mentioned again in their spelled-out form. - Page 6: what are the definitions of mild liver disease and moderate-severe liver disease? - Statistics: Were all

continuous variables homogenous to use the student t-test? Why was a cutoff P value of 0.2 used? Including variables that were predictors of the outcome depending on previous studies is a bias. - Discussion is too long, please summarize

I have tried to go through and abbreviate all the appropriate terms correctly. Please let me know if I have missed any. The student t-test was only conducted on homogenous variables. The multivariate logistic regression model was constructed by first examining variables that are known to be associated with the outcomes on previous studies and conducting a univariate regression analysis. Any variable less than 0.2 or with previous significance as a possible confounder was also used in the model. The reason 0.2 was chosen was to narrow the model to only potential confounders. The aim is to increase the accuracy of the model. The discussion was adjusted to make it more concise. The topic is extensive, so at the same time, I also want to address the various findings.

The following are the codes for the mild and moderate liver diseases. They are taken directly from the CCI codes. I did not create my own combination of codes to define mild or moderate-severe liver disease as I felt that would create controversy over the results. Since CHILD and MELD scores, cannot be used, I chose to use a validated index system and chose a defined variable within that system. It is mentioned in the paper, that this is where the definition comes from and that it can only be used as a placeholder since those scoring systems are not available as ICD codes. It cannot be used as a replacement, which is why we would like this study to function as a foundation for future studies to study this topic further.

ICD codes definition for mild liver disease

ICD 9: 070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 070.6, 070.9, 570.x, 571.x, 573.3, 573.4, 573.8, 573.9, V42.7

ICD10: B18.x, K70.0 - K70.3, K70.9, K71.3 - K71.5, K71.7, K73.x, K74.x, K76.0, K76.2 - K76.4, K76.8, K76.9, Z94.4

Moderate-severe

ICD9: 456.0 - 456.2, 572.2- 572.8

ICD10: I85.0, I85.9, I86.4, I98.2, K70.4, K71.1, K72.1, K72.9, K76.5, K76.6, K76.7

<https://cran.r-project.org/web/packages/comorbidity/vignettes/comorbidityscores.html>

As a reference

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: Based on a large pool of patient numbers, the manuscript analyzed the factors that affect the length of stay and hospital charges in cirrhotic patients who present with ST-elevation myocardial infarction-related cardiogenic shock (SRCS), and found that LC was associated with significantly increased inpatient mortality, length of stay, and total hospital charges in patients who develop SRCS. Overall, this was a fascinating, rigorous, and solid investigation; the conclusion was convincing and informative.

Thank you so much for this review. We hope that this paper will provide framework for future studies in this area.

Please let me know how else I can refine the paper. We are delighted to have our work published in your journal.

Sincerely,

Sophia Dar, MD
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Department of Internal Medicine