Review of: "Liver Function Test Abnormalities and Associated Factors Among Liver Disease Patients at the University of Gondar Comprehensive Specialized Hospital Northwest, Ethiopia: Cross Sectional Study"

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Potential competing interests: No potential competing interests to declare.

The manuscript by Melkamu et al. offers an insightful exploration into the dynamic interplay of liver function parameters during liver disease, aiming to refine strategies for managing individuals affected by this condition.

Overall Impression: MAJOR revision is needed. The manuscript requires significant revision as it lacks scientific rigor both in its conception and its write-up. The language and writing style need substantial improvement, including a thorough review for typos and sentence structure issues. This will ensure clarity and coherence throughout the manuscript.

Background: Clarifying the study's rationale is essential to delineate its unique contribution. While the association between elevated AST, ALT, and total bilirubin with liver disease is well-established in the literature, the manuscript should articulate its specific objectives and novel insights more clearly.

The acronym ALD should be defined upon its first mention to facilitate reader comprehension.

Materials and methods: Providing a robust scientific rationale for the choice of the study location is crucial. Justifying why this particular hospital was selected, especially regarding its patient demographics, would reinforce the study's validity.

Comprehensive inclusion and exclusion criteria, along with ethical considerations, should be explicitly outlined in this section.

Results: The results lack a coherent synthesis for easy comprehension, resembling raw data rather than a rigorously analyzed presentation tailored for the reader's understanding

In some tables, the sum of percentages fails to reach 100%, indicating potential errors that necessitate thorough verification and correction by the authors.

In Figure 1, the representation should reflect frequency rather than count, aligning with the labeled y-axis. Additionally, the title should be revised from "Magnitude" to "Frequency" for clarity. Moreover, "both abnormalities" should be corrected to "all liver abnormalities".

The rationale behind the selection and assessment of factors in the multivariate analysis remains unexplained, necessitating clarification from the authors.

Furthermore, terminology adjustments are needed, such as changing "bivariable and multivariable logistic regression" to "bivariate and multivariate logistic regression." Additionally, separating the confidence interval with a dash (i.e., AOR=0.45; 95% CI: 0.21 - 0.95) would enhance readability.

Regarding the multivariate logistic regression analysis, the association of viral hepatitis and ALD with increased AST and ALT seems redundant, as elevated levels of these enzymes are characteristic of both conditions. This redundancy requires acknowledgment and clarification in the analysis.

Lastly, while the multivariate logistic regression analysis suggests that males are protected against elevated ALT (with an AOR < 1 indicating protection), the discussion appears to contradict this finding. The authors should address this inconsistency and discuss the protective effect of gender against elevated ALT.

Discussion: Restructuring the discussion to provide a more coherent narrative and critically analyze the study's findings is imperative. Rather than solely comparing results with existing literature, a deeper exploration of the implications of the findings is warranted.

The manuscript should strive to offer insightful interpretations of the data, moving beyond mere recapitulation of results to provide meaningful insights for clinical practice.

Conclusion: The discussion lacks a coherent scientific structure, and the findings from the study are not critically elucidated. Rather than offering a thorough explanation, it primarily consists of comparing the study results with those of other research, lacking depth in the interpretation of the findings. Thus, a comprehensive rewrite of the discussion is warranted.

Furthermore, the recommendation at the study's conclusion to monitor AST, ALT, and bilirubin in patients with liver disease is already a widely recognized and implemented practice globally. Consequently, the rationale behind the study becomes questionable.