REVIEWER'S REPORT

Manuscript No.: IJAR- 50351

Date: 20/02/2025

Title: "Screening for Occult Hepatitis B Infection Among Chronic Liver Disease Patients Attending a Tertiary Care Hospital"

Recommendation:

✓ Accept as it is …………………………………

Accept after minor revision………………

Accept after major revision ………………

Do not accept (*Reasons below*) ………

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Name: Dr. S. K. Nath

Date: 21/02/2025

Reviewer's Comment for Publication.

This paper addresses a clinically significant issue with appropriate methodology and robust statistical analysis. Provides valuable insights into OBI detection using surrogate markers like anti-HBc antibodies. Requires extensive language and formatting revisions. Needs a clearer hypothesis, deeper discussion of findings, and acknowledgment of study limitations. Could benefit from visual aids and clearer data presentation.

Reviewer's Comment / Report

Strengths of the Paper:

1. **Relevance and Novel Contribution:** The study addresses a significant clinical issue: the detection of Occult Hepatitis B Virus Infection (OBI) in patients with Chronic Liver Disease (CLD). The focus on OBI prevalence in CLD patients fills a critical gap in existing research, particularly in the Indian context.

2. **Robust Methodology:** The use of a cross-sectional observational study design over one year is appropriate for assessing the prevalence of OBI. Implementation of advanced diagnostic tools such as real-time PCR (RT-PCR) for detecting HBV DNA enhances the reliability and sensitivity of results. ELISA screening for HBsAg and anti-HBc antibodies is a standard diagnostic tool, lending credibility to the methodology.

3. **Comprehensive Data Analysis:** Utilizes relevant statistical tools (Chi-square test, Fisher's exact test, and Kappa value analysis) to assess correlations and agreement between tests. A large sample size (n = 207) strengthens the study's validity. Proper classification of OBI cases into seropositive and seronegative categories enhances clarity.

4. **Clear Presentation of Results:** The inclusion of multiple tables to present prevalence rates, liver function test (LFT) comparisons, and demographic profiles helps readers understand the data clearly. The study's findings on the prevalence of OBI (2.96%) and the effectiveness of surrogate markers like total anti-HBc antibodies provide meaningful insights.

5. **Strong Literature Support:** The paper references several previous studies, offering comparisons with findings from different regions and patient populations. The discussion effectively contextualizes the findings within the global and Indian epidemiological landscape.

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

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Areas for Improvement:

1. **Language and Grammar Issues:** The manuscript contains numerous grammatical errors, awkward phrasing, and formatting issues that hinder readability.
Example:
"OBI is a clinical condition which is difficult to diagnose and it mainly has two important characteristics: Absence of HBsAg, and low viral replication."

Improved version: *"OBI is a challenging clinical condition to diagnose, characterized by the absence of HBsAg and low viral replication."*

Recommendation: A thorough language edit is needed for clarity and professionalism.

2. **Lack of Clear Hypothesis and Objective:** Although the introduction outlines the importance of the study, a clearly defined hypothesis and more structured research objectives would improve clarity.

Suggestion: Include a clear statement such as:
"This study aims to determine the prevalence of OBI among CLD patients and evaluate the diagnostic utility of anti-HBc antibodies as a surrogate marker."

3. **Discussion Lacks Depth in Interpretation:** The discussion does not adequately explore potential mechanisms behind OBI or why certain demographics (e.g., males aged 36-45) are more affected.

Suggestion: Delve deeper into the immunological factors, HBV mutations, or socio-demographic variables that might influence prevalence.

4. **Sample Limitation Acknowledgment Missing:** The study lacks acknowledgment of potential limitations, such as:
   • **Single-center study** limiting generalizability.
   • **Small female participant pool** affecting gender-related findings.
   • **Short duration of study** potentially missing seasonal variations in OBI prevalence.

Suggestion: Add a dedicated limitations section and suggest areas for future research.

5. **Inconsistent Data Presentation:** Some tables and figures lack clarity and appropriate headings. P-values and confidence intervals should be consistently reported for all statistical results.

Suggestion: Ensure all tables are well-labeled and data points are presented uniformly.

6. **Lack of Visual Aids:** Graphical representations (e.g., bar graphs or pie charts) would enhance understanding of prevalence rates, demographic distribution, and liver function comparisons.

Suggestion: Include at least one visual representation of OBI prevalence and LFT comparisons.