

## REVIEWER'S REPORT

Manuscript No.: IJAR-51920

Date: 28-05-2025

**Title: Evaluation of Biochemical and Hematological Alterations in Patients with Cholelithiasis: A Hospital-Based Cross-Sectional Study**

### Recommendation:

**Accept as it is.....YES.....**

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

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

**Reviewer's Name:** Dr Aamina

**Reviewer's Decision about Paper:** **Recommended for Publication.**

**Comments** (*Use additional pages, if required*)

### Reviewer's Comment / Report

#### Abstract Evaluation:

The abstract is well-structured, concisely outlining the background, methodology, key results, and conclusion of the study. The clinical significance of cholelithiasis is clearly established, with a specific focus on the high prevalence in northern India. The methods are appropriate and adequately described, including sample size, parameters studied, and statistical methods. The results are quantitatively precise and support the stated conclusion. The conclusion is logically drawn from the presented findings and emphasizes the diagnostic relevance of biochemical and hematological markers.

#### Introduction Evaluation:

The introduction provides a comprehensive overview of cholelithiasis, addressing its global and regional prevalence. It effectively contextualizes the significance of studying this disease in Uttar Pradesh. Epidemiological statistics are used to strengthen the rationale for the study, and the introduction successfully bridges the gap between the clinical problem and the research objective. The background information is up-to-date and relevant, supported by cited prevalence data. The section ends with a clear indication of the study's intent to explore liver function and inflammatory markers in patients with gallstone disease.

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### Methodology Evaluation:

The methodology section outlines a robust cross-sectional design conducted over six months, with an appropriate sample size of 240 participants. The inclusion of both confirmed cholelithiasis patients and healthy controls ensures a comparative analysis. The parameters assessed are well-chosen, focusing on liver function, pancreatic enzymes, and inflammatory response. The use of SPSS and the Mann-Whitney U test is suitable for the type of data being analyzed. The ethical considerations are properly addressed, enhancing the credibility and compliance of the research.

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### Results Evaluation:

The results are clearly presented, with specific numerical values and standard deviations for each parameter. The findings demonstrate significant differences in bilirubin levels, liver enzymes, and inflammatory markers between patients and controls. These data reinforce the association between cholelithiasis and hepatobiliary dysfunction. The inclusion of pancreatic enzyme levels, although not statistically significant, adds depth to the analysis. The interpretation of elevated CRP and TLC levels provides insight into the inflammatory component of the disease.

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### Scientific Relevance and Clinical Significance:

This study contributes meaningfully to the understanding of cholelithiasis by documenting its biochemical and hematological signatures. The findings support the use of routine blood parameters in the early detection and management of gallstone-related complications. The emphasis on a high-burden region like Uttar Pradesh enhances the local public health relevance and supports region-specific clinical practices. The results may also assist in identifying subclinical cases or complications, providing a valuable tool for clinicians.

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### Overall Evaluation:

The study presents a clear and well-supported investigation into the biochemical and hematological alterations associated with cholelithiasis. The methodology is appropriate, the results are statistically and clinically relevant, and the discussion is grounded in a strong epidemiological and pathophysiological framework. The manuscript is of high academic and clinical relevance, particularly in regions with a high burden of gallstone disease.