

## REVIEWER'S REPORT

Manuscript No.: IJAR-52953

Date: 24/07/2025

**Title: A PROSPECTIVE STUDY ON PERITONEAL FLUID CULTURE AND ITS ANTIBIOTIC SENSITIVITY IN PERFORATIVE PERITONITIS PATIENTS**

### Recommendation:

Accept as it is .....

**Accept after minor revision.....Yes.....**

Accept after major revision .....

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

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

Reviewer Name: Dr. Sireesha Kuruganti

Date: 24/07/2025

### Reviewer's Comment for Publication.

*(To be published with the manuscript in the journal)*

*The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.*

The manuscript presents a prospective study on peritoneal fluid culture and antibiotic sensitivity in patients with perforative peritonitis, a topic of significant clinical importance due to the high morbidity and mortality associated with this condition and the growing challenge of antibiotic resistance. The study's aim to analyze the patterns of organisms and their antibiotic sensitivity/resistance to guide empirical therapy is commendable.

### Detailed Reviewer's Report

This detailed review provides feedback on the manuscript, with specific attention to areas for improvement. Line numbers are referenced where applicable to facilitate direct edits by the author.

In-depth Review of "A PROSPECTIVE STUDY ON PERITONEAL FLUID CULTURE AND ITS ANTIBIOTIC SENSITIVITY IN PERFORATIVE PERITONITIS PATIENTS"

The manuscript presents a prospective study on peritoneal fluid culture and antibiotic sensitivity in patients with perforative peritonitis, a topic of significant clinical importance due to the high morbidity and mortality associated with this condition and the growing challenge of antibiotic resistance. The study's aim to analyze the patterns of organisms and their antibiotic sensitivity/resistance to guide empirical therapy is commendable.

However, several areas require attention to enhance the clarity, rigor, and impact of the manuscript.

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#### General Comments:

\* "UNDER PEER REVIEW IN IJAR" Watermark: The watermark is distracting and should be removed for final submission or review. It appears repeatedly on pages 1, 2, 3, 5, and 7.

\* Formatting and Consistency: There are inconsistencies in spacing, font, and capitalization throughout the document (e.g., "G%" vs. "6%" on page 1, "COMPARITIVE STUDY" vs. "Prospective Study" in the abstract on page 1 and then "DESIGN OF STUDY: COMPARITIVE STUDY" on page 3). Ensure uniform formatting.

\* Clarity and Conciseness: Some sentences are verbose or could be rephrased for better clarity and conciseness.

#### Specific Comments (with Line Numbers where applicable):

##### 1. Abstract (Page 1):

\* "Background: Perforative peritonitis remains a major surgical emergency with high morbidity and mortality. Antibiotic resistance is an emerging challenge." While true, the first sentence is general. Consider being more specific about why it's a major emergency (e.g., "associated with high morbidity and mortality").

\* "Results: Duodenal perforations (52%) were most common, followed by gastric (42%) and ileal (G%)." "G%" should be "6%". This minor error needs correction.

\* "Klebsiella (4G%) and E. coli (34%) were predominant isolates." Similarly, "4G%" should be "46%".

\* "High sensitivity was noted with ceftriaxone and ciprofloxacin, while ampicillin and cotrimoxazole showed significant resistance." This is a key finding and well-stated.

\* "Conclusion: Empirical antibiotic therapy should consider high resistance to older antibiotics. Culture-guided therapy improves outcomes in perforative peritonitis." This conclusion is appropriate based on the findings.

##### 2. Introduction (Page 1-2):

\* Line 5 (Page 1): "Peritonitis is still among the most frequent issues that general surgeons deal with." This sentence is a bit informal. Consider rephrasing to "Peritonitis remains one of the most frequent challenges encountered by general surgeons."

\* Lines 8-9 (Page 2): "The use of antibiotics and surgery in the treatment of peritonitis has only significantly improved in recent decades." This sentence feels a bit out of place as it doesn't flow directly from the preceding statement about morbidity and mortality. Rephrase to connect it more smoothly, perhaps by stating that despite advances, challenges persist.

\* Lines 10-11 (Page 2): "For the surgeon, an intra-abdominal infection is a huge obstacle. The peritonitis that frequently presents itself to us is secondary peritonitis brought on by a perforated hollow viscus." "Huge obstacle" is informal. Consider "significant challenge" or "major hurdle."

\* Lines 12-13 (Page 2): "The doctors who are treating it are aware of the terrible and catastrophic complication; the issues might range from a simple wound infection to risky septic shock or SIRS (systemic inflammatory response syndrome)." "The doctors who are treating it are aware of the terrible and catastrophic complication" is somewhat vague. It would be better to state the severity directly, e.g., "Intra-abdominal infections can lead to severe and catastrophic complications, ranging from..."

\* Bullet points (Page 2): The bullet points listing challenges ("The age of patient," "Time interval of presentation," etc.) are good.

\* Line 15 (Page 2): "When administering antibiotics, it was discovered that targeting aerobes resulted in UNDER to treat the condition quickly." This sentence is incomplete and unclear due to the "UNDER" watermark interfering with the text. Please complete and clarify. It seems to suggest that targeting aerobes helps quick treatment, which needs to be fully articulated.

\* Last paragraph of Introduction (Page 2): "In order to start early and appropriate antibiotic therapy in our patients presenting with perforative peritonitis preoperatively, which can improve the patient's outcome, various organisms that are growing in the peritoneal fluid culture of the patients presenting with perforative peritonitis and their antibiotic sensitivity and resistance pattern in our institute were analysed

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in this study." This sentence is very long and convoluted. Break it down into shorter, clearer sentences. For example: "To facilitate early and appropriate preoperative antibiotic therapy and improve patient outcomes in perforative peritonitis, this study analyzed the organisms grown in peritoneal fluid cultures and their antibiotic sensitivity and resistance patterns at our institute."

#### 3. Methodology (Page 3):

\* "DESIGN OF STUDY: COMPARITIVE STUDY" (Page 3): The abstract states "A prospective study". Here it states "COMPARITIVE STUDY". Please ensure consistency. If it's a comparative study, what is being compared? If not, maintain "Prospective Study."

\* "STUDY PERIOD: SEPTEMBER 2022- JUNE2024" (Page 3): Consistent formatting for dates, e.g., "June 2024".

\* "STUDY POPULATION : Patients presenting to ASRAM medical college hospital with perforation peritonitis." (Page 3): "hospital" should be capitalized.

\* "SAMPLE SIZE: 100" (Page 3): Clear and concise.

\* INCLUSION/EXCLUSION CRITERIA (Page 3): These are well-defined.

#### 4. Results (Page 3-4):

\* Table 1. Age & Sex Distribution (Page 3):

\* The table formatting is messy due to the "DER" watermark. Ensure the table is clearly presented.

\* "2G" should be "26" and "3G" should be "36".

\* Table 3. Organisms Isolated (Page 4):

\* "4G" for Klebsiella should be "46".

\* The "IJAR" watermark obscures the "No Growth" frequency. It appears to be "14" but needs confirmation.

\* Ensure all frequencies sum up correctly.

\* Table 4. Antibiotic Sensitivity (Page 4):

\* This table is heavily obscured by watermarks ("REVIEW", "25", "8.G", "U1.1%", "73.U%", "12.5%", "17.3%"). It is impossible to fully interpret the data. This table is crucial for the study's findings and must be legible. Specifically:

\* The headings "Ceftriax-", "padidin", "amixazole", "one" are fragmented and unclear.

\* The percentages under "REVIEW" and other columns are unreadable due to the watermark and formatting issues.

\* The meaning of "25" and "8.G" (which might be 8.6%) is unclear without proper column headers.

\* The "U1.1%" and "73.U%" should be corrected (likely 91.1% and 73.0% or 73.4%).

\* The column for resistance percentages (e.g., "12.5%", "17.3%") is also missing a clear header and might be incomplete.

\* This table is the most critical part of the results and must be completely visible and accurately formatted.

#### 5. Discussion (Page 4-5):

\* Line 24 (Page 4): "It is typical for hollow viscus perforations to result in secondary peritonitis." Good introductory statement.

\* Line 25 (Page 4): "Due to patients' delayed hospital presentations, it has a high death rate." "Death rate" could be rephrased as "mortality rate."

\* Lines 26-27 (Page 4): "In our study, the prevalence of secondary peritonitis caused by perforation was 7:1 higher in males than in females. Furthermore, our study's ratio is marginally greater than that of other well accepted publications." Well-explained finding.

\* Lines 28-29 (Page 4): "Males are more likely than females to experience perforations, which is most likely caused by their erratic eating patterns, drinking, and smoking." This is a reasonable explanation, but it's an inference. Consider softening the language, e.g., "This is likely due to..."

\* Lines 29-30 (Page 4): "The age range of 3-40 years old accounted for the majority of perforation instances in our study, with 20-30 years old coming in second." This sentence structure is slightly

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awkward. Rephrase to "The majority of perforation instances in our study occurred in the 31-40 years age group, followed by 20-30 years." (Based on Table 1, 31-40 yrs has 36 patients, 20-30 yrs has 26).

\* Line 30 (Page 4): "The presentation's mean age is 35.2G years old." "2G" should be "26".

\* Lines 31-32 (Page 4): "The patient's medical history confirms that there has been no long-term exposure to medications such as steroids and NSAIDs." This statement is a bit strong. If it's a finding, it should be presented as such, perhaps indicating how many patients had such exposure. If it's an exclusion criterion or a general observation, it needs to be clearly stated as such.

\* Lines 32-34 (Page 4): "When a patient is admitted to the hospital, most of them do so after two to three days of symptoms, or about 50% of instances. after those who have perforation peritonitis, only 11% come to see us within a day after symptom onset. The average presentation lasts for almost 2.G hours." "2.G" should be "2.6". The sentence structure for these observations can be improved for flow. For instance: "Approximately 50% of patients presented to the hospital two to three days after symptom onset, while only 11% presented within one day. The average duration of symptoms before presentation was nearly 2.6 hours."

\* Lines 34-35 (Page 4-5): "This study indicates that the cephalosporin drug class, which is followed by the quinolone and amikacin groups of pharmaceuticals, is the most sensitive in the majority of cases with perforated peritonitis." This is a key finding and should reference the specific data from Table 4 once it's legible. "Amikacin groups of pharmaceuticals" could be shortened to "aminoglycosides" or "amikacin."

6. Conclusion (Page 6):

\* Line 36 (Page 6): "The majority of the patients exhibited resistance to the cotrimoxazole group of medicines and ampicillin." Clear and consistent with the abstract.

\* Lines 37-38 (Page 6): "This study concludes that the duodenum and stomach have the highest rates of perforation, respectively. Peptic ulcer illness was the cause of the majority of cases. lowed by" "lowed by" is incomplete. It should likely connect to the next sentence about Klebsiella.

\* Line 39 (Page 6): "In these patients, Klebsiella was the most common cause of secondary peritonitis, followed by Escherichia coli, and very infrequently, mixed, proteus, and pseudomonas." Good summary of microbial findings.

\* Line 40 (Page 6): "Escherichia coli and Klebsiella were both susceptible to the cephalosporin medication class, which was followed by quinolones and macrolide antibiotics." This contradicts the abstract and discussion slightly, which mention amikacin. Macrolides were not mentioned earlier as highly sensitive. Please ensure consistency here with the data presented in Table 4 (once legible). If macrolides showed sensitivity, it should be clearly presented in the results.

7. References (Page 6-8):

\* General: The reference list is quite extensive. Ensure all cited references are actually referenced in the text using the specified format.

\* Formatting: Check for consistent formatting across all references (e.g., journal titles, volume, issue, page numbers). Some entries are missing page ranges or have inconsistent capitalization.

\* Inconsistencies/Errors:

\* References 1, 2, 3 (Page 6): "pgno: C33-C50", "pgn:1088-1114", "pg no: 1035-10UU". "C" might be "6" or "5". "UU" might be "00". Correct these numerical values.

\* Reference 4 (Page 6): "Cthedition" should be "6th edition".

\* Reference 6 (Page 6): "C27-CU7" should be corrected.

\* Reference 7 (Page 6): "5UU-C148." should be corrected.

\* Reference 8 (Page 6): "Non traumatic terminal ileal perforation, Dr. Rauf, et al, World journal of emergency surgery drug of choi" - Incomplete sentence at the end.

\* Reference 9 (Page 6): "drug of choice for treatment of anerobic infection, Dr. Sonja, et al, Sweden" - Incomplete. "anerobic" should be "anaerobic."

\* Reference 11 (Page 6): "OCT 2U 2020" - "2U" likely means "20."

\* Reference 14 (Page 6): "2255-CO." - "CO" needs correction.

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- \* Reference 16 (Page 7): "ISOR-JDMS. 2017;1C(3):34-7" - "1C" needs correction.
- \* Reference 17 (Page 8): "Int J Res Med Sci.201C;4(12):5120-4" - "201C" needs correction.
- \* Reference 18 (Page 8): "201C." needs correction.
- \* Reference 19 (Page 8): "pacific island" should be "Pacific Island".
- \* Reference 20 (Page 8): "ed medica" is duplicated.
- \* Reference 22 (Page 8): "Appendectomy m paediatrics the value of peritonealfluidsmear and its bacteriological profile, Dr. Manal, et 1, Open journal" - Incomplete. "m paediatrics" should be "in pediatrics". "peritonealfluidsmear" should be "peritoneal fluid smear".

### **Key Areas for Revision:**

- \* Legibility of Tables, especially Table 4: This is paramount. The watermarks completely obscure critical data.
- \* Consistency in Numbers/Percentages: Correct all instances of "G%", "4G%", "2G", "3G", "2.G", "UU", "C".
- \* Clarity and Conciseness of Language: Review the entire manuscript for awkward phrasing, incomplete sentences, and overly long sentences.
- \* Consistency in Methodology Description: Clarify if it's a "Prospective" or "Comparative" study.
- \* Conclusion Consistency: Ensure the conclusion accurately reflects all presented findings, especially regarding antibiotic sensitivities.
- \* Reference List Accuracy and Formatting: Thoroughly review and correct all errors and inconsistencies in the reference list.

Addressing these points will significantly improve the quality and readability of the manuscript.