Peer Review File

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Reviewer A

Nicely written and well-presented article. However, scientific background is not enough from a surgical point of view.

Thanks for your suggestion, we have revised the article.

Changes in the text: We have modified our text as advised (see Page4, line99-109)

Reviewer B

Thank you for asking me to review this article which looks at anxiety and depression scores in patients undergoing ERCP for choledocholithiasis. While intriguing to consider the mental status of patients undergoing a specific procedure, this study really only finds that patients having a surgical procedure and getting complications are more prone to anxiety and depression – a finding that lacks any real novelty. Pre- and post- procedure comparisons were not done, and comparisons between other patient groups were not done – both of which may have provided the novelty which this study lacks.

Thank you for your suggestion. This paper, through data collection, collation and analysis, discusses the analysis of risk factors of perioperative negative emotions in patients with choledocholithiasis treated by ERCP and its influence on prognosis. We therefore included negative emotions as the main grouping and clarified the importance of focusing on patients with perioperative negative emotions.

Particular points to address are:

1. The introduction describes in depth the different modalities of managing choledocholithiasis, however this is not particularly relevant to this study, as this study only examines patients treated with ERCP. A more informative introduction that looks at anxiety and depression around the time of illness and procedures would be more appropriate.

Thanks for your suggestion, we have revised the article.

Changes in the text: We have modified our text as advised (see Page4, line99-103)

2. It is unclear from the methods as to the timing of when the general questionnaire, the SAS, the SDS, the VAS and the SF-36 were completed by patients.

Thanks for your suggestions, we have added to the article.

Changes in the text: We have modified our text as advised (see Page6, line166-167;172-

173; Page7, line186)

3. Please provide a robust definition in the Methods for how you define a patient with ‘negative emotions.

Thanks for your suggestions, we have added to the article.

Changes in the text: We have modified our text as advised (see Page6, line166-167)

4. Try to avoid repeating data in the Methods section that is already presented in Tables.

Thanks for your suggestion, we have revised the article.

Changes in the text: We have modified our text as advised (see Page7, line204-209)

5. There are some highly inflammatory comments made in the discussion related to anxiety/depression levels in women and middle-aged people – made without referencing any evidence. I would highly caution the authors and the journal about making unreferenced remarks such as these.

Thanks for your suggestion, we have revised the article.

Changes in the text: We have modified our text as advised (see Page10, line303-307)

6. Most of the discussion, similar to the introduction, focuses on the different management strategies for choledocholithiasis and offers no discussion as to the anxiety and depression of patients.

Thanks for your suggestion, we have revised the article.

Changes in the text: We have modified our text as advised (see Page4, line99-103)

Reviewer C

The objective of this study was to investigate the factors that have a negative impact on the emotional state of patients with choledocholithiasis who undergo ERCP, as well as to determine if negative emotions could affect their prognosis. Although the scientific concept behind the study is intriguing, regrettably, the manuscript's current quality does not meet the standards required for publication.

I would like to provide some constructive feedback that could enhance the quality of the manuscript.

The major issues of the manuscript:

- The study's methodology did not specify the study design, although it appears to be a retrospective cohort study. However, it is unclear how the emotional scales and other scores (such as anxiety, depression, pain, and SF-36) were obtained since they are typically not collected from ERCP patients during routine practice. To ensure the

validity of the study's results, the authors need to clarify how a retrospective study could obtain these outcome measures, which are usually unavailable.

Thank you for your advice. This was a cross-sectional study, with SAS and SDS on the 10th day after surgery and SF-36 scores on patients one month after surgery.

Changes in the text: We have modified our text as advised (see Page6, line167-168; line173-174; Page7, line187)

- The method section of the manuscript lacked sufficient details to enable readers to replicate the study. Furthermore, it was not clear from either the text or the participant flow diagram (Figure 1) when the authors obtained information from participants regarding their anxiety and depression levels. Additionally, there was no information regarding when the pain score and SF-36 score were evaluated. These omissions detract from the study's credibility and make it difficult for other researchers to evaluate the results.

Thank you for your advice. SAS and SDS were scored on the 10th day after surgery, VAS was scored on the 5th day after surgery, and SF-36 was scored on the 1st month after surgery.

Changes in the text: We have modified our text as advised (see Page6, line167-168; line173-174; Page7, line187)

- The authors provided only the month of the last follow-up, which is insufficient for readers to determine the duration of follow-up (e.g., 3-6 months follow-up). It is important to include this information in a study like this to ensure that the follow-up period is appropriate and that readers can assess the validity of the study's findings.

Thank you for your advice. The SF-36 score was evaluated one month after surgery, so the last follow-up time was June 2022.

Changes in the text: We have modified our text as advised (see Page7, line187)

- In the method and result sections, there are several outcomes related to negative emotions (with and without negative emotions). It appears that the authors divided patients into two groups based on whether they experienced negative emotions or not. However, it is not clear how the authors differentiated between these two groups, as they did not provide any information about this in the manuscript. While the authors provided detailed information about two scales (anxiety and depression scales), each of these scales has multiple categories, further complicating the differentiation of patients into groups.

Thank you for your advice. We combined SAS and SDS scores to define whether patients have negative emotions. Patient SAS>50 points or SDS >52 points or both of them are defined as having negative emotions, and vice versa.

Changes in the text: We have modified our text as advised (see Page6, line167-168)

- In the "Complications which occurred in included patients" subsection of the results, several sentences were repeated at both the beginning and end of the subsection. Specifically, the sentence *"Of the patients who developed postoperative vomiting, 7 (33.3%) developed negative emotions, and 14 (66.7%) did not. Of the patients who developed postoperative bleeding, 6 (37.5%) developed negative emotions, and 10 (62.5%) did not. Among the patients with postoperative biliary fistula, 4 (44.4%) had negative emotions, and 238 (55.6%) had no negative emotions. For patients with postoperative negative emotions, the pain value was 2.68±1.36, while for patients without postoperative negative emotions, the pain value was 2.18±1.22."* were identically repeated.

Thank you for your advice. This was our mistake and we have corrected it in the article.

Changes in the text: We have modified our text as advised (see Page8, line225-233)

- In the results section, the information presented in Tables 2 to 4 and the related text is quite confusing. The tables should be designed in a way that clearly illustrates how various factors can affect emotional outcomes (with and without negative emotions). The current design of the tables may lead to confusion among readers, as it is not immediately clear whether emotions are affecting the factors or vice versa. To improve the clarity of the results, the authors should consider revising the design of these tables.

Thank you for your advice. Since we study how various factors affect the results of emotions, we are divided into two groups with or without negative emotions for comparison, so as to clarify the role of different factors in the two groups of patients.

Changes in the text: None.

There are several minor issues with the manuscript that could be addressed to improve its quality:

- Firstly, there are too many tables, and it may be beneficial to merge tables that represent similar outcomes or analyses, such as Tables 2 to 4 and Tables 5 and 6.

Thank you for your advice. We believe that separate tables are clear and concise, but together they may be too long and not concise enough.

Changes in the text: None.

- Secondly, Figures 2 and 3 repeat the details of Tables 5 and 6, so the authors should choose one presentation method (either the Figures or Tables) to avoid redundancy.

Thanks to your advice, we have removed Figures 2 and 3 from the article.

Changes in the text: We have modified our text as advised (see Page28, line2-3)

- Thirdly, the baseline data subsection in the results section repeats many details found in Table 1. To improve the readability and conciseness of the manuscript, it may be better to summarize the information in the text rather than repeat it.

Thanks to your suggestion, we have revised the description of baseline data in the results section of this paper.

Changes in the text: We have modified our text as advised (see Page7, line205-210)

- Additionally, the beginning of the discussion section repeats much of the scientific background from the introduction. It may be better to focus more on discussing the results and their implications rather than reiterating the study's background.

Thanks to your advice, we have condensed the first description in the discussion section.

Changes in the text: We have modified our text as advised (see Page10, line285-294)

- Lastly, the manuscript fails to address the study's limitations in the discussion.

Thanks for your suggestions, we have mentioned the limitations of this study and the corresponding solutions in the last paragraph of the discussion section.

Changes in the text: We have modified our text as advised (see Page13, line387-390)

Reviewer D

The paper titled "Analysis of risk factors for negative emotions during the perioperative period in choledocholithiasis patients treated with ERCP and the impact on prognosis" is interesting. Analysis of risk factors for negative emotions during the perioperative period in choledocholithiasis patients treated with ERCP and the impact on prognosis. However, there are several minor issues that if addressed would significantly improve the manuscript.

1) The background did not indicate the clinical needs for this research focus and the potential causes of the recurrence of choledocholithiasis after ERCP, which needs further revisions.

Thanks for your suggestions. This study focuses on the influence of perioperative negative emotions on prognosis, and due to the limited number of words in the abstract, we have revised it.

Changes in the text: We have modified our text as advised (see Page2, line26-31)

2) Figures 2-3 are not clear enough. It is recommended to provide clearer figures again.

Thanks for your suggestion. According to other reviewers' opinions, we deleted the pictures.

Changes in the text: We have modified our text as advised (see Page28, line2-3)

3) What methods can improve the negative emotions during the perioperative period in choledocholithiasis patients treated with ERCP? What impact will it have on patients' executive function, self-esteem, and cognition? It is recommended to add relevant content.

Thanks for your suggestions, we have added to the article.

Changes in the text: We have modified our text as advised (see Page12 line376-380)

4) What is the clinical significance of psychological counseling in preventing postoperative complications of ERCP in patients with choledocholithiasis? It is recommended to add relevant content.

Thanks for your suggestions, we have added to the article.

Changes in the text: We have modified our text as advised (see Page12 line376-380)

5) The number of patient samples in this study is too small, and a large sample study should be added for verification.

Thanks for your suggestions, we have added to the article.

Changes in the text: We have modified our text as advised (see Page5 line127-135)

6) The introduction part of this paper is not comprehensive enough, and the similar papers have not been cited, such as "The correlation between postoperative complications of ERCP and quality of life after discharge in patients with choledocholithiasis, PMID: 34353066". It is recommended to quote the article.

Thanks for your suggestion, we have supplemented the article and quoted the literature.

Changes in the text: We have modified our text as advised (see Page4 line95)

7) How effective is the negative emotions during the perioperative period in patients with other diseases? It is recommended to increase relevant discussions.

Thank you for your advice. Studies on other diseases in this direction are few and limited by the length of the paper, so we won't go into it too much.

Changes in the text: None.

Reviewer E

1) First of all, my major concern for this study the misleading terms in the title such as "negative emotions" and "risk factors" because the authors depressive and anxiety symptoms investigated in this study cannot represent negative emotions such as anger and guilt. The analysis on factors associated with depression and anxiety is also cross-sectional analysis, so the current study cannot assess risk factors. Risk factors can only be examined in longitudinal studies. The authors need to revise the title and elsewhere of this manuscript as appropriate. Please also indicate the clinical research design in the title such as a cross-sectional analysis of associated factors and longitudinal analysis on the prognostic role of depression and anxiety.

Thank you for your suggestion. We define whether patients have negative emotions based on SAS and SDS scores. Patient SAS>50 points or SDS >52 points or both of them are defined as having negative emotions, and vice versa. In addition, we have

changed the title to cross-sectional analysis of factors associated with perioperative negative emotions in patients with choledocholithiasis treated with ERCP and its influence on prognosis.

Changes in the text: We have modified our text as advised (see Page1 line1-2; Page6, line167-168)

2) Second, the abstract needs further revisions. The background did not indicate the knowledge gaps on and potential clinical significance of this research focus. The methods did not describe the inclusion of subjects, the measurements of depressive and anxiety symptoms, the assessment of potential factors, follow up procedures, and measurements of prognosis outcomes. The results need to briefly summarize the baseline clinical characteristics of the study sample, the prevalence of depressive and anxiety symptoms, and the incidence rate of prognosis outcomes. Please also quantify the findings on associated factors by using statistics such as OR and accurate P values. The conclusion needs more detailed comments for reducing the risk of depressive and anxiety symptoms.

Thanks for your suggestion, we have revised the abstract.

Changes in the text: We have modified our text as advised (see Page2 line26-Page3 line55)

3) Third, the introduction of the main text is very bad and inadequate. The authors should not review what has been known on CBDS. Please review what has been known on the prevalence of depressive and anxiety symptoms in patients with CBDS, their associated factors, and the prognostic roles of depression and anxiety, have comments on limitations and knowledge gaps of prior studies, and have comments on the potential clinical significance of these research focuses.

Thanks for your suggestion, we have revised the text.

Changes in the text: We have modified our text as advised (see Page4 line99-104)

4) Fourth, in the methodology of the main text, the clinical research design and sample size estimation procedures should be described in detail. The authors' current procedures for sample size estimation are problematic since they did not consider the focus of analysis on the prognostic roles of depressive and anxiety symptoms and loss to follow up. Please clearly describe the follow up procedures and the measurements of prognosis outcomes. The authors need to explain why they assessed pain and quality of life because the two are not the focuses of this study. In statistics, please describe the details for analyzing associated factors and prognostic roles such as how potential confounders were adjusted for. I do not think both logistic and linear regression analyses are needed. Please ensure $P<0.05$ is two-sided.

Thank you for your advice. We have added a description of the sample size estimate to the method. Although the evaluation of pain and quality of life is not the focus of the study, we believe that it reflects the prognosis of patients and postoperative quality of life to some extent, so it is necessary. The factors for the multiple liner regression were selected after adjusting potential risk factors using univariable regression models. Multiple linear regression and Binary logistic regression were used to analyze the independent risk factors for negative mood and poor prognosis.

Changes in the text: We have modified our text as advised (see Page7 line197)

Reviewer F

1. You've mentioned "studies", while only one reference was cited in this sentence. Please check. (You could either choose to revise it to "study" or to give **more than one reference** in this sentence. In the latter case, please keep the citations consecutively in text.)

537 rare but serious complication of ERCP. Some studies have reported ERCP perforation
538 rates of 0.08–2%, with an associated mortality rate of 3–20% (33). Intraoperative

473 (19). Some studies have reported that the gallbladder aids digestion and improves lipid
474 metabolism (20), and thus its removal may have an impact on the metabolic balance of

494 Some studies have shown that the care by medical and nursing staff can enhance the
495 confidence of patients and reduce negative emotions such as fear and depression, which
496 is important for the recovery of patients (26). Therefore, in clinical practice,

Thank you for the suggestion, we have revised it.

2. Please revise the table header of table 1, the same items are not allowed to appear, it is suggested to add a new title for t and p.
Please see the example below:

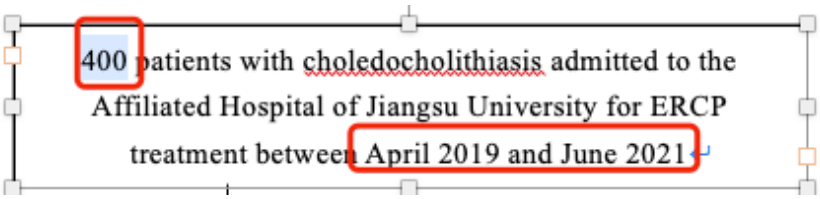
Table 1 Sarcopenic obesity in liver disease

Study	Sample size, N (% males)	XXX		XXX		Prevalence of SO
		Adiposity	Cut-off	Muscularity	Cut-off	
Kamo *et al.* (2019) (8)	277 (48.4%)	VFA or BMI	VFA ≥100 cm^2 BMI ≥25 kg/m^2	SMI [SMI = SMA/ht (cm^2/m^2)]	Male: <40.31 Female: <30.88	SMI and VFA =3% SMI and BMI =2%
Kroh *et al.* (2019) (9)	70	Body fat percentage	Top 2 quintiles	SMI [SMI = SMA/ht (cm^2/m^2)]	Male: <43, if BMI <25;	23%

Thank you for the suggestion, we have revised it.

3. Figure 1: Please check both the date and the number, according to your paper, 400 is just the ideal sample size, not the actual included number of cases. Otherwise, you should revise the statement.

A total of 364 patients with choledocholithiasis admitted to the Affiliated Hospital of Jiangsu University for ERCP treatment between July 2019 and June 2022 were included in this study.



Thank you for the suggestion, we have revised it. We counted 400 cases, but found during the study that did not meet the requirements of this study and lost some cases, and finally described and analyzed 364 cases.