

PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 80329

Title: Hyponatremic encephalopathy due to polyethylene glycol-based bowel preparation for colonoscopy: A case report

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05688164

Position: Peer Reviewer

Academic degree: BSc, MD, PhD

Professional title: Research Fellow

Reviewer's Country/Territory: Hungary

Author's Country/Territory: China

Manuscript submission date: 2022-09-23

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-09-26 06:18

Reviewer performed review: 2022-09-29 07:07

Review time: 3 Days

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Judgment by peer reviewers	Does this manuscript meet the code of ethics standards? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important novelty? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important creativity or innovation?

	<input type="checkbox"/> [J31] Yes <input type="checkbox"/> [J30] No Does this manuscript use reliable research methods? <input type="checkbox"/> [J41] Yes <input type="checkbox"/> [J40] No Are the manuscript-accompanying data and figures authentic? <input type="checkbox"/> [J51] Yes <input type="checkbox"/> [J50] No Does this manuscript make scientifically significant conclusions? <input type="checkbox"/> [J61] Yes <input type="checkbox"/> [J60] No
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> [Y] Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> [Y] Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> [Y] Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> [Y] Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> [Y] No

SPECIFIC COMMENTS TO AUTHORS

29 September 2022 Review report on the manuscript titled ‘Hyponatremic encephalopathy due to polyethylene glycol-based bowel preparation for colonoscopy: A case report’ by Zhao Y & Dong H, submitted to World Journal of Gastroenterology
 Manuscript ID: 80329 Dear Authors, Zhao and Dong in the present case report entitled ‘Hyponatremic encephalopathy due to polyethylene glycol-based bowel preparation for colonoscopy: A case report’, described a case of a 63-year-old female who presented with acute hyponatremic encephalopathy and seizures after bowel cleansing with polyethylene glycol (PEG) for colonoscopy. The main strength of this manuscript is that it addresses an interesting and timely question, providing a captivating interpretation and describing how bowel preparation with PEG for colonoscopy might lead to brain edema associated with hyponatremia. In general, I



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think the idea of this paper is really interesting and the authors' fascinating observations on this timely topic may be of interest to the readers of World Journal of Gastroenterology. However, some comments, as well as some crucial evidence that should be included to support the authors' argumentation, needed to be addressed to improve the quality of the manuscript, its adequacy, and its readability prior to the publication in the present form. My overall opinion is to publish this paper after the authors have carefully considered my suggestions below, in particular reshaping parts of the 'Introduction' and 'Discussion' sections by adding more evidence. Please consider the following comments: 1. Abstract: In my opinion, the absence of a definition of 'hyponatremia' makes the reader unable to grasp the key aspects of this paper by just consulting the abstract. I suggest reorganizing the abstract, making sure to include an explanation of this medical condition. 2. Keywords: Please list the keywords in a way that the first two sentence of the abstract use as many keywords as possible. 3. In general, I recommend authors to use more evidence to back their claims, especially in the Introduction of the manuscript, which I believe is currently lacking. Thus, I recommend the authors to attempt to deepen the subject of their manuscript, as the bibliography is too concise: nonetheless, in my opinion, less than 30 articles for a paper are insufficient. Therefore, I suggest focusing their efforts on researching more relevant literature: I believe that adding more studies and reviews will help them to provide better and more accurate background to this study. 4. Background: As suggested before, I strongly recommend authors to use more evidence to back their claims, especially in the Background of this manuscript, which seems inhomogeneous and dispersive. Nevertheless, I believe that more information about neurologic complications and death as a result of acute hyponatremia will provide a better and more accurate background. Thus, I suggest the authors to make such effort to provide a brief overview of the pertinent published on neurobiological signs of this disorders, because as it stands, this

information is not highlighted in the text. In this regard, I would recommend citing recent studies that have focused on neurobiological mechanisms and molecular signs of neuroinflammation following chronic hyponatremia (<https://doi.org/10.3390/ijms21072431>; <https://doi.org/10.3390/ijms23136991>; <https://doi.org/10.3390/biomedicines10081897>; <https://doi.org/10.3390/cells11162607>). 5. I suggest better explaining and further describing data about the subject and provide full information on his clinical assessment (i.e., severity of disorder, pharmacotherapy duration etc.). Moreover, I suggest using more references to back their claims, especially when describing the laboratory tests used. 6. Discussion: I suggest rewriting this section more accurately. To properly present experimental findings, I think that authors should provide more details about consequences of acute hyponatremia on the brain functioning. Also, the discussion of data citation was good and captured the state of the art well, but I would have liked to see some views on a way forward: for example, I would have liked some further discussion on the requirement of non-pharmacotherapies to treat possible neurologic disorders related to hyponatremia. Notably, non-invasive brain stimulation (NIBS) techniques have been widely used to investigate brain mechanisms, for example mechanisms of defense of the brain against hypotonicity flowing hyponatremia, or to modify and enhance cognitive, behavioral, social, and emotional processes: in this regard, I believe that it could be very useful to add evidence of NIBS effect on treatment of clinical manifestations of brain adaptation capacities to a hypo-osmotic challenge, and how NIBS are often used to boost neuropsychological or psychiatric rehabilitation, through modulation of neuroplasticity (<https://doi.org/10.1016/j.neubiorev.2021.04.036>; <https://doi.org/10.1016/j.jad.2021.02.076>; <https://doi.org/10.3949/ccjm.74.5.377>). 7.

In my opinion, I think the 'Conclusions' paragraph would benefit from some thoughtful as well as in-depth considerations by the authors, because as it stands, it is



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very descriptive but not enough theoretical as a discussion should be. The authors should make their effort to explain the theoretical implication as well as the translational application of their research. 8. In according to the previous comment, I would ask the authors to include a proper 'Limitations and future directions' section before the end of the manuscript, in which authors can describe in detail and report all the technical issues brought to the surface. 9. Overall, I suggest submitting your work to an English native speaker to help with some grammar mistakes that can be found in different sections of the manuscript. Overall, the manuscript contains 1 table, 1 figure and 11 references. I believe that this manuscript might carry important value describing how bowel preparation with PEG for colonoscopy might lead to brain edema associated with hyponatremia. I hope that, after these careful revisions, the manuscript can meet the Journal's high standards for publication. I am available for a new round of revision of this review. I declare no conflict of interest regarding this manuscript. Best regards,
Reviewer

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03544596

Position: Editorial Board

Academic degree: MD

Professional title: Academic Editor, Associate Professor

Reviewer's Country/Territory: Turkey

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Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Judgment by peer reviewers	Does this manuscript meet the code of ethics standards? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important novelty? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important creativity or innovation?

	<input type="checkbox"/> [31] Yes <input type="checkbox"/> [30] No Does this manuscript use reliable research methods? <input type="checkbox"/> [41] Yes <input type="checkbox"/> [40] No Are the manuscript-accompanying data and figures authentic? <input type="checkbox"/> [51] Yes <input type="checkbox"/> [50] No Does this manuscript make scientifically significant conclusions? <input type="checkbox"/> [61] Yes <input type="checkbox"/> [60] No
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Dear Editor, Thanks to the authors for this case report. Polyethylene glycol based solution is the most widely used intestinal cleansing agent and is a relatively safe option for patients. The manuscript adequately describes the background, present status and significance of the study. Also, the manuscript cites appropriately important references. Hyponatremia encephalopathy induced by PEG solutions is rare. Because of that, I think it will contribute to the literature.

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Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05260701

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Specialist

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Judgment by peer reviewers	Does this manuscript meet the code of ethics standards? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important novelty? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Does this manuscript have important creativity or innovation?

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Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> [Y] Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> [Y] No

SPECIFIC COMMENTS TO AUTHORS

1 Title. The title reflects the main subject of this case report. 2 Abstract. The abstract summarizes and reflect the case described in the manuscript 3 Key words. The key word "neurological" should be removed. 4 Background. The existing background is presented; however, more data about the prevalence of hyponatremia and PEG-based solutions should be provided. 5 Methods. N/A since a case report 6 Results. N/A since a case report 7 Case presentation and Discussion. The authors should revise the manuscript in order to provide more clearly the differential diagnosis. Are there any previous labs? 8 Illustrations and tables. Figure is OK. 9 Biostatistics. N/A since a case report 10 Units. yes 11 References. Can be improved. 12 Quality of manuscript organization and presentation. Both organisation and presentation of the manuscript can be ameliorated. This case report does not contribute to the existing literature. The

manuscript suffers in terms of English language.