

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-23-425>

Reviewer A

The authors Chen et al have conducted a well written review on the incidence and risk factors of VAP in patients with TBI. My only concern about the manuscript is regarding the methodology. On page 14, the PRISMA flow chart shows that 90 reports were sought for retrieval, but almost half of these (42) were not retrieved. I feel this would be a methodological limitation. Perhaps the authors can give an explanation for this.

Reply: Thank you for your comment. I am sorry that the first digit in the figure is an incorrect illustration. We have replaced it with the correct one.

Changes in the text: figure 1

Also, a lot of the discussion is very generic. It would be helpful if the discussion was more specific to the TBI population.

Reply: Thank you for your comment. We have added these contents to the discussion section.

Changes in the text: Paragraph 1,2 / Discussion

Line 72: use "kind of.." instead of "type of..".

Reply: Thank you for your comment. We have corrected it.

Changes in the text: Paragraph 1,2 / Introduction

Reviewer B

Dear Authors, this review about incidence rate and risk factors of ventilator associated pneumonia in patients with traumatic brain injury is really interesting and well performed. I am pretty sure that both scientists and dental professionals will find it helpful. By the way, some issues need to be solved before its final acceptance in the paper.

Abstract: please divide it into: introduction, materials and methods, results, conclusions.

Reply: Thank you for your comment. We have corrected it.

Changes in the text: Paragraph 1,2,3,4 / Abstract

Introduction: introduction is a really important part of a scientific article. It helps the reader deep into the subject you are presenting. In your article, this part is too short and it needs to be lengthened. Please add a small chapter about the importance of maintaining a good oral hygiene in hospitalized patients to avoid ventilator associated pneumonia. This paper can help you: Ludovichetti FS, Zuccon A, Positello P, Zerman N, Gracco A, Stellini E, Mazzoleni S. Preventive oral hygiene and ventilator-associated pneumonia in paediatric intensive care unit. Eur J Paediatr Dent. 2022 Dec;23(4):298-

302.

Reply: Thank you for your comment. We have corrected it.

Changes in the text: Paragraph 1,2,3,4 / Introduction

Materials and methods: well performed and well written.

Results: ok, easy to understand.

Discussion: it would be helpful to add a small chapter about the risks of ventilator associated pneumonia in hospitalized patients and how nowadays this problem is being faced.

Reply: Thank you for your comment. We have added related contents to the discussion section.

Changes in the text: Paragraph 1,2 / Discussion

Reviewer C

I have performed a thorough review of manuscript ID: JTD-23-425.

The authors conducted a systematic review and meta-analysis of observational studies that investigated the incidence rate and risk factors associated with ventilator-associated pneumonia in patients with traumatic brain injuries.

Regarding major comments, I found no significant issues to address.

In terms of minor comments, I suggest that the authors provide more details about tracheotomy as they identified a high degree of heterogeneity in their analysis. Specifically, the authors should specify whether the tracheotomy was done early or late in their dichotomic analysis. This clarification is important as some studies have demonstrated a decrease in ventilator-associated pneumonia incidence with early tracheotomy as compared to late tracheotomy. Overall, I appreciate the informative and well-conducted study presented in this manuscript.

Reply: Thank you for your comment. The study we included did not provide a detailed description of the timing of tracheostomy and cannot be defined as early or late tracheostomy. We have also conducted research on relevant literature and found that there are still some controversial points in this discussion (Hoshino T, Yonekura H, Nakamori Y, Kamei M. Early versus late tracheostomy in patients with traumatic brain injury. *Intensive Care Med.* 2020 Jun;46(6):1286-1287. doi: 10.1007/s00134-020-05998-4. Epub 2020 Mar 11. PMID: 32162030; PMCID: PMC7223371).

Changes in the text: None

Reviewer D

1. Please check if any more references need to be added in the below sentence since you mentioned “Studies”, but only one reference was cited. If not, “studies” should be changed to “a study/a previous study”.

In this study, the incidence of VAP in patients with TBI was approximately 42% (95% CI: 32–53%), slightly higher than the 10–40% reported in previous studies (24).

Reply: Thank you for your comment. We have revised it.

2. The below author’s name should be “Lepelletier”.

significantly increased the risk of ventilator-associated pneumonia. Hamele and Didier et al. showed that the use of the sedative barbiturate increased the risk of ventilator-associated pneumonia in patients with TBI (17,19), possibly because the

Reply: Thank you for your comment. We have revised it.

3. Table 1:

1) The publication year of Zhang et al is 2019 in the reference 12. Please unify.

Zhang et al. (2020) (12)	Retrospective cohort	27/78
--------------------------	----------------------	-------

Reply: Thank you for your comment. We have revised it.

2) The below author’s name is wrong. It should be “Jovanovic”.

Jovanovic et al. (2015) (18)	Prospective cohort	71/144	49.30%
------------------------------	--------------------	--------	--------

Reply: Thank you for your comment. We have revised it.

3) Please indicate how the data are presented in below variables. Are they “RR (95% CI)”?

Age (over 60 years)	Mechanical ventilation	Tracheostomy	Diabetes	Prophylactic antibiotics	Gender (male)	Barbiturate use
1.163 (0.912, 1.414)	1.883 (1.485, 2.281)	2.135 (1.631, 2.639)	1.006 (0.734, 1.278)	1.206 (0.759, 1.653)	1.618 (1.212, 2.024)	NA

Reply: Thank you for your comment. We have added it.

4) Please indicate the full name of “TBI”, “NA” in table footnote.

Reply: Thank you for your comment. We have added it.

5) The references in Table 1 need to participate in the order of references in the text. As Table 1 appears behind reference 14 in your text, the references in Table 1 should be cited from reference 15.

Please modify the order of references in the main text, reference list and Table 1.

antibiotics, postracheotomy, use of ventilator, and history of diabetes (see Table 1).

All included studies were independently assessed for literature quality by Chen and Wu using the Newcastle-Ottawa Scale (NOS) for each included study based on the following criteria (15): (I) representativeness of exposed groups, (II) selection of

Reply: Thank you for your comment. We have revised it.

4. Figures 2-10:

1) Your Figures 2-10, Figures 2-10 legends and your main text are all inconsistent. Please check and unify them carefully.

Reply: Thank you for your comment. We have revised it.

2) Same with Table 1, the publication year and author name “Jovanovic” are also wrong in your Figures. Please revise.

Reply: Thank you for your comment. We have revised it.

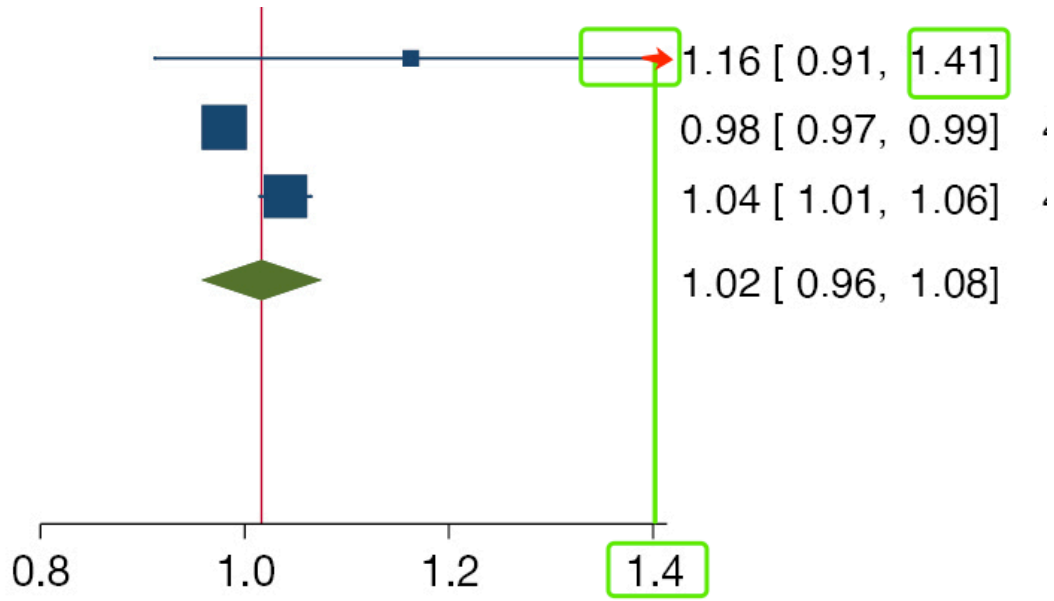
3) Please complete all numbers “.xx” with “0.xx” in your Figures.



Reply: Thank you for your comment. We have revised it.

4) To standardize the results, the part that exceeds the horizontal coordinates should be indicated by arrows (for example as Figure 3 below). Please revise your all Figures.

57



Reply: Thank you for your comment. We have revised it.