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OPEN PEER REVIEW

Dexmedetomidine Nasal Packing Versus Intravenous Dexmedetomidine for Controlling Bleeding During Turbinate Surgeries: A Randomized Double-Blind Trial

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

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1 Original submission

2 comments · 12 Jul 2024 – 21 Jul 2024

Referee 1 Reviewer

MAJOR REVISION 12 Jul 2024

Page 1: The title needs to be revised. The title does not fully reflect the article's characteristics.
Keywords haven't been selected properly. For example, is "intravenous" a proper keyword for this article?
Page 3:
You haven't mentioned whether the same surgeon performed all surgeries.
This can introduce bias.
Page 4: Background:
The main title and goal of your article concern the reduction of bleeding during surgery, but you have not focused on it; instead, you have focused on the sedative effect of DEX.

Page 5: The inclusion and exclusion criteria need more explanation and detail.
"body mass index (BMI) was above thirty kg/m2"??? When you want to use a unit after a number, it is better to write it this way: 30 kg/m2.
During the procedure, if severe bradycardia occurred, did you exclude that patient?

Page 6:
"Two remaining patients were randomized into two groups (30 patients each)???"

Page 6&7:
The results and discussion sections need to be revised. The results are not clearly understandable when reading these sections.

The article should be reviewed by a native English speaker.

Editor-in-Chief

MAJOR REVISION 21 Jul 2024

I recommend that the authors revise the manuscript according to the reviewers' comments before further processing.

1st reviewer
Review of Randomized Controlled Trial: "Nasal Packing versus Intravenous Dexmedetomidine for Controlling Bleeding during Turbinate Surgeries"
Title and Abstract
- **Title**: The title accurately describes the study's focus on comparing nasal packing and intravenous dexmedetomidine (DEX) for managing bleeding in turbinate surgeries.
- **Abstract**: The abstract provides a clear summary of the study's background, methods, results, and conclusions. It effectively conveys the key findings, highlighting the comparability of nasal packing DEX and IV DEX in controlling intraoperative bleeding, surgical field quality, pain score, and patient satisfaction.
Introduction
- The introduction comprehensively outlines the clinical problem of turbinate enlargement and its surgical management. It introduces DEX and its properties, setting the stage for the study's comparison of nasal packing versus IV administration.
- **Suggestion**: Including a brief discussion on the significance of this comparison and potential clinical implications could enhance the introduction.
Methods

- The methods section is detailed and well-structured, describing the study design, participant selection, randomization, and blinding procedures.
- **Participants**: Clearly defined inclusion and exclusion criteria ensure the study population is well-specified. However, more details on the randomization process and blinding procedures could provide additional clarity.
- **Interventions**: The descriptions of the intervention protocols for both groups are thorough, including dosages and administration timings.
The dosage of fentanyl for induction, 1 mcg/kg, seems to be insufficient.
The duration of bolus DEX administration is not mentioned, and the side effects of bolus DEX are not reported.
It is not mentioned how they induced controlled HOTN during surgery.
The PONV prophylaxis drugs and their doses are not mentioned.
- **Outcomes**: The primary and secondary outcomes are clearly defined, with appropriate measurement methods described.
- **Sample Size Calculation**: The sample size calculation is well-explained, providing confidence in the study's statistical power.
Results
- The results are presented clearly, with appropriate use of tables and figures to summarize key data.
- **Patient Characteristics**: Baseline characteristics of the two groups are comparable, supporting the validity of the randomization process.
- **Primary Outcome**: The intraoperative blood loss is presented with mean values and standard deviations, showing no significant difference between the two groups.
- **Secondary Outcomes**: Measures of intraoperative hemodynamics, surgical field quality, pain scores, and patient satisfaction are well-documented. The results support the conclusion of no significant differences between the groups.
- **Statistical Analysis**: The statistical methods used are appropriate, and results are presented with p-values to indicate significance.
Discussion
- The discussion section effectively interprets the study's findings in the context of existing literature. It highlights the comparable efficacy of nasal packing and IV DEX in controlling intraoperative bleeding.
- **Limitations**: The discussion appropriately acknowledges limitations, such as the small sample size and single-center design. However, it could benefit from a more detailed exploration of potential biases and confounding factors.
- **Future Research**: Suggestions for further research are provided, emphasizing the need for larger, multi-center trials and comparisons with other medications.
Conclusion
- The conclusion succinctly summarizes the study's findings, reiterating the main point that nasal packing DEX and IV DEX are comparable for managing bleeding during turbinate surgeries.
References
- The references are relevant and appropriately cited. Ensuring the inclusion of the most recent studies would further strengthen the manuscript.
Graphical Representation
- The graphical representations, including the CONSORT flowchart and figures for heart rate and mean arterial pressure changes, are clear and well-labeled. These visuals effectively complement the text.

2nd reviewer
Dear Authors
Thank you for sending the following manuscript.

1. What is the necessity and purpose of the study?
2. Mention the criteria for inclusion in and exclusion from the study.
3. References should be imported in Vancouver format using En Node software.

3rd reviewer
Page 1: The title needs to be revised. The title does not fully reflect the article's features.
The keywords haven't been selected properly. For example, is "intravenous" an appropriate keyword for this article?
Page 3:
You haven't mentioned whether the same surgeon performed all surgeries.
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"body mass index (BMI) was above thirty kg/m2"??? When you want to use a unit after a number, it is better to write it this way: 30 kg/m2.
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2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

1st reviewer

Introduction

- The introduction comprehensively outlines the clinical problem of turbinate enlargement and its surgical management. It introduces DEX and its properties, setting the stage for the study's comparison of nasal packing versus IV administration.

- *Suggestion*: Including a brief discussion on the significance of this comparison and potential clinical implications could enhance the introduction.

In addition to being accessible, noninvasive, and practical, intranasal DEX provides the same sedative and analgesic properties as intravenous (IV) routes [8]. During surgical operations, intranasal DEX at 1 and 1.5 μg/kg doses significantly reduced intraoperative pain and induced drowsiness [9]. The efficacy of intranasal DEX has been shown in several clinical trials [6, 10, 11].

Methods

- The methods section is detailed and well-structured, describing the study design, participant selection, randomization, and blinding procedures.

- *Participants*: Clearly defined inclusion and exclusion criteria ensure the study population is well-specified. However, more details on the randomization process and blinding procedures could provide additional clarity.

Randomization and blinding:

Patients were assigned randomly in a parallel manner into two equal groups (30 patients in each group), utilizing computer-generated numbers and sealed opaque envelopes.

Neither the participants nor the researchers involved in the study knew which group a participant is assigned to. Drug administration was handled by individuals who are unaware of the treatment assignments. Medication preparation was performed by a pharmacist who did not take part in the study.

Inclusion Criteria:

Eighteen to 65-year-old patients from both sexes classified according to the American Society of Anesthesiologists (ASA) as class I to II who were scheduled for turbinate surgeries were included.

Exclusion criteria:

Included patients who refused to participate in the study, those having an allergy to DEX, second- or third-degree atrioventricular blocks, persistent bradycardia requiring intervention, coagulopathy, severe hepatic and renal

impairment, blood diseases, patient on anticoagulant drugs and patients receiving chronic analgesic therapy.

- *Interventions*: The descriptions of the intervention protocols for both groups are thorough, including dosages and administration timings.

The dosage of fentanyl for induction, 1mcg/kg seems to be insufficient.

As we used fentanyl in addition to DEX always we have range of 1-2mcg/kg.

The duration of bolus DEX is not mentioned, also side effects of bolus DEX is not reported.

Bolus DEX was infused till the end of surgery and we mentioned we treating hypotension and bradycardia if it is done.

It is not mentioned that how they induced controlled HTN during surgery.

We induced controlled HTN during surgery by DEX.

The PONV prophylaxis drugs and their dose, are not mentioned.

PONV was treated by ondansetron 0.1 mg/kg IV.

- *Limitations*: The discussion appropriately acknowledges limitations, such as the small sample size and single-center design. However, it could benefit from a more detailed exploration of potential biases and confounding factors.

Patients were excluded if they had certain conditions or were taking certain medications, which could have introduced selection bias into the study. The study did not control for potential confounding factors such as age, sex, or smoking status, which could have influenced the outcomes.

2nd reviewer

Dear Authors

Thanks for sending the following manuscript

1.What is the necessity and purpose of the study?

This work aimed to assess if (DEX)-soaked nasal packing non-inferior to intravenous (IV) DEX for managing bleeding during turbinate surgeries.

2. Mention the criteria for inclusion and exclusion the study.

Inclusion Criteria:

Eighteen to 65-year-old patients from both sexes classified according to the American Society of Anesthesiologists (ASA) as class I to II who were scheduled for turbinate surgeries were included.

Exclusion criteria:

Included patients who refused to participate in the study, those having an allergy to DEX, second- or third-degree atrioventricular blocks, persistent bradycardia requiring intervention, coagulopathy, severe hepatic and renal impairment, blood diseases, patient on anticoagulant drugs and patients receiving chronic analgesic therapy.

3. References should be imported in Vancouver format and with En Node software

Done and revised

3rd reviewer

Page 1: Title need to be revised. The title does not reflect article's feature completely.

Dexmedetomidine Nasal Packing versus Intravenous Dexmedetomidine for Controlling Bleeding during Turbinate Surgeries: A Randomized Double-Blind Trial

After revise to give clear image what we are going to do in our research to different groups and effect on bleeding control

The “intravenous” is a proper keyword for this article?

Keywords: Intravenous dexmedetomidine; control bleeding; Nasal Packing; Turbinate surgery

Page 3:

You haven’t mentioned to this issue that, same surgeon for all surgeries or not? because it can make Bios.

The same surgical team performed turbinate surgeries for all included patients.

Page 4: Background:

main title and goal of your article is reduction of bleeding during surgery, but you have not focused on it and you focused on sedative effect of DEX.

Nasal obstruction due to hypertrophied turbinates (HT) is one of the common reasons of patients’ attending turbinate operations. which associated with intra-operative nasal bleeding which can obscure the visibility of the field and prolong time of surgery. The purpose of this study to compare Dexmedetomidine-soaked nasal packing (NP) and intravenous (IV) dexmedetomidine (DEX) for managing bleeding during turbinate surgeries to decrease blood loss and improve surgical field quality.

Page 5: inclusion and exclusion criteria need more explanation and details.

Inclusion Criteria:

Eighteen to 65-year-old patients from both sexes classified according to the American Society of Anesthesiologists (ASA) as class I to II who were scheduled for turbinate surgeries were included.

Exclusion criteria:

Included patients who refused to participate in the study, those having an allergy to DEX, second- or third-degree atrioventricular blocks, persistent bradycardia requiring intervention, coagulopathy, severe hepatic and renal impairment, blood diseases, patient on anticoagulant drugs and patients receiving chronic analgesic therapy.

During procedure, if severe bradycardia was happening did you exclude that patient?

Severe bradycardia mentioned in exclusion criteria clearly if not responding to regular management should be excluded.

Page 6:

“Two remaining patients were randomized into two groups (30 patients each)???”

It is just a typing error. “The remaining patients were randomized into two groups (30 patients each)”.

Page 6&7:

The results and discussion section need to be revised. By reading them, the results are not clearly understandable.

Patient characteristics and duration of surgery were similar in both groups. Table 1
Hemodynamics (MAP and HR) were similar in both groups at various time points during the surgery and at the end of the surgery (baseline,10, 20, 30, 40, 50, 60 min and at the end of surgery). Figure 2
The mean ± SD of intraoperative blood loss was similar in both groups (In NP group: 124.1 ± 34.85 ml, in IV group: 115.63 ± 31.89 ml, P = 0.330).
Frommer's scores were similar in both groups. Table 2
Time to first rescue analgesia and total dose of pethidine consumption used in the first 24 hours were similar in both groups Table 2
VAS measurements were similar in both groups at various time points(2, 4, 6, 8, 12, 8, and 24h) after surgery. Table 3
Patients' satisfaction and side effects (bradycardia, hypotension, and PONV) were similar in both groups. Table 4
The article should be reviewed by a native person.

Done

2 Revision 1

3 comments · 13 Aug 2024 – 12 Sep 2024

Referee 2 Reviewer — ACCEPT — 13 Aug 2024

The research is well revised.

Referee 1 Reviewer — MINOR REVISION — 14 Aug 2024

Dear Authors

Thanks for your attention and for sending the revised manuscript.
Given that some minor errors still remain, please ask a native English speaker to review the manuscript.
Best Regards

Editor-in-Chief — MINOR REVISION — 12 Sep 2024

Dear Authors
Thank you for your kind contribution. Fortunately, the majority of the issues have been cleared and just a minor comment remains.

I appreciate the effort that has gone into the revision of this manuscript. To enhance its clarity and flow, I recommend a native edit. This would help ensure that the language is polished and that the ideas are communicated effectively.

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

1st reviewer

Thank you for your effort

2nd reviewer

Thank you for your comment

Dear sir

we had done with revision of English writing for whole paper

Page 3:

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The same surgical team performed turbinate surgeries for all included patients.

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The article should be reviewed by a native person.

Done

3 Revision 2

0 comments

No public comments in this round.