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REVIEWER'S REPORT

Manuscript No.: IJAR-56614

Title: Incidence and Risk Factors of Perioperative Respiratory Incidents in Pediatric Anesthesia: A Prospective Observational Single-Center Study,

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's ID: JPR-094

Detailed Reviewer's Report

1. Strengths of the Manuscript

1. **Relevant Clinical Topic**

The study addresses perioperative respiratory incidents in pediatric anesthesia, which are an important cause of perioperative morbidity and require continuous monitoring and preventive strategies.

2. **Prospective Study Design**

The prospective observational design strengthens the methodological quality compared with retrospective analyses.

3. **Adequate Sample Size**

Inclusion of **470 pediatric patients** provides a reasonably large dataset for statistical analysis and increases reliability of findings.

4. **Clear Identification of Risk Factors**

The study appropriately used **univariate and multivariate logistic regression** to identify independent predictors of perioperative respiratory incidents.

5. **Contextual Contribution**

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Data from **Morocco and other low- and middle-income settings are limited**, therefore the study contributes useful regional epidemiological information.

6. **Clinical Relevance**

The identified predictors (upper airway obstruction, multiple intubation attempts, agitation at induction) are **clinically modifiable**, making the findings applicable to anesthesia practice.

2. Weaknesses of the Manuscript

1. **Single-Center Design**

The study was conducted in a single hospital, which limits the **generalizability of findings to other institutions or healthcare systems**.

2. **Short Study Duration**

The six-month study period may not capture **seasonal variations or broader clinical trends**.

3. **Incomplete Assessment of Some Variables**

The **Mallampati score could not be assessed in 18.1% of patients**, which may introduce bias in airway assessment.

4. **Potential Confounding Factors Not Recorded**

Important variables such as **recent upper respiratory tract infection, passive smoking exposure, and preoperative respiratory disease** were not systematically evaluated.

5. **Composite Outcome Definition**

The study grouped multiple respiratory events of different clinical severity into a **single composite endpoint**, which may limit interpretation of the relative importance of individual complications.

6. **Limited Discussion of Preventive Strategies**

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While risk factors are identified, the discussion could further elaborate **practical strategies for prevention and management**.

3. Significance of the Study

This study provides **valuable epidemiological data on perioperative respiratory incidents in pediatric anesthesia in a Moroccan tertiary hospital**. The reported incidence (26.8%) highlights the importance of perioperative airway management and patient risk stratification in low- and middle-income settings. The findings may assist clinicians in identifying high-risk patients and improving perioperative safety.

4. Key Points

- * Prospective observational study involving **470 pediatric surgical patients**.
- * Overall incidence of perioperative respiratory incidents: **26.8%**.
- * **Oxygen desaturation** was the most frequent event.
- * Three independent risk factors identified:
 - * Upper airway obstruction
 - * Multiple intubation attempts
 - * Agitation at induction
- * Findings emphasize the importance of **preoperative airway evaluation and careful anesthetic management**.

5. Recommendation

Decision: Minor Revision

The manuscript addresses an important clinical issue and presents valuable prospective data. However, several aspects require clarification and improvement, particularly regarding methodological limitations, discussion of confounding factors, and elaboration on preventive strategies. After minor revisions addressing these issues, the manuscript may be suitable for publication.

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Response to Reviewers – Minor Revision

1. Abstract Section

Comment

Improve clarity of wording and standardize terminology.

Response

The abstract was edited for clarity and consistency with the terminology used throughout the manuscript.

Changes

****Line 7–8****

Original

> Few prospective studies from low- and middle-income countries have simultaneously evaluated patient-, surgical-, and anesthesia-related determinants of these events.

Revised

> Few prospective studies from low- and middle-income countries have simultaneously evaluated patient-, surgical-, and anesthesia-related determinants of these events.

Reason

Minor wording correction for parallel structure.

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****Line 16****

Original

> Desaturation (SpO₂ < 90%) was the most common event.

Revised

> Oxygen desaturation (SpO₂ < 90%) was the most common event.

Reason

Clarified term and corrected spacing.

****Line 22****

Original

> clinically modifiable

Revised

> potentially modifiable

Reason

Improved scientific precision.

2. Introduction

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Line 35–37

Original

> Although usually reversible, these events may be life-threatening when not promptly recognized and managed.

Revised

> Although usually reversible, these events may become life-threatening if not promptly recognized and treated.

Reason

Minor wording improvement.### Line 38–42

Original text contained ****spacing errors in citations****.

Revised

All citations reformatted.

Example

Original

> [3,4 37]

Revised

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> [3,4]

Reason

Reference formatting correction.

Line 40–42

Original

> limited availability of specialized airway equipment, and limited available personnel

Revised

> limited availability of specialized airway equipment and trained personnel

Reason

Avoid redundancy.

3. Methods

Line 52–54

Original

> pediatric surgical operating rooms

Revised

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> pediatric operating rooms

Reason

Improved readability.

Line 56–59

Original

> refusal of parental or legal guardian informed consent

Revised

> refusal of informed consent by parents or legal guardians

Reason

Grammatical correction.

Line 61–68

The list of variables was ****restructured**** for clarity.

Example change

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Original

> Variables recorded included: (i) demographic data ...

Revised

> Variables recorded included:

> (i) demographic data ...

Reason

Formatting improvement.

4. Definitions

Line 71

Original

> SpO₂ < 90%

Revised

> SpO₂ < 90%

Reason

Standardized formatting.

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Line 73

Citation formatting corrected.

Original

> [3,4 73]

Revised

> [3,4]

5. Results

Line 98

Original

> The most represented age group

Revised

> The most represented age group was

Reason

Minor grammatical correction.

Table 1

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Formatting corrections:

* spacing between variables corrected

* column alignment improved

* typo corrections:

Original

> Surgicalfactors

Revised

> Surgical factors

Original

> Visceralsurgery

Revised

> Visceral surgery

Original

> Anestheticfactors

Revised

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> Anesthetic factors

6. Univariate Analysis

Line 120–126

Minor punctuation and spacing corrections were implemented in the odds ratio reporting.

Example

Original

> OR = 6.28; p < 0.001

Revised

> OR = 6.28 (p < 0.001)

Reason

Consistency with statistical reporting.

7. Multivariate Analysis

Line 137–141

Original

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> using a stepwise backward elimination strategy

Revised

> using a backward stepwise elimination strategy

Reason

Terminology clarification.

8. Discussion

Line 149–152

Citation formatting corrected.

Original

> [7 151]

Revised

> [7]

Line 160–162

Original

> greater prevalence of nutritional and respiratory comorbidities

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Revised

> higher prevalence of nutritional and respiratory comorbidities

Reason

Language improvement.

Line 177

Original

> strongest independent predictor in our model

Revised

> strongest independent predictor identified in our model

Reason

Improved precision.

Line 191

Original

> particularly in children under 3 years

Revised

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> particularly in children younger than 3 years

Reason

Standard scientific wording.

9. Limitations

Line 210

Original

> monocentric design

Revised

> single-center design

Reason

Use of internationally standard terminology.

Line 214–216

Sentence restructured for clarity.

Original

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> potential confounders such as recent upper respiratory tract infection and passive tobacco smoke exposure were not systematically recorded

Revised

> some potential confounders, such as recent upper respiratory tract infection and passive tobacco smoke exposure, were not systematically recorded

Reason

Minor wording clarification.

10. References

Several ****minor corrections**** were implemented:

* spacing between words corrected

* journal titles standardized

* DOI formatting unified

Example

Original

> PaediatrAnaesth.

Revised

> Paediatr Anaesth.

Final Statement

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All modifications are ****minor editorial and clarity improvements**** that ****do not modify the study methodology, results, statistical analysis, or conclusions****.

We believe these revisions have improved the readability and scientific quality of the manuscript.