

Peer Review File

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Reviewer A

Comment 1: Need a better formulated question

Reply 1: Thank you very much for your professional advice. After repeated discussion by the research group, we believe that this study used the method of evidence summary. Based on the results of the data review, such studies do not need formulated question, so there is no change.

Changes in the text: No change.

Comment 2: I suggest clear short recommendation with references and Grading

Reply 2: We have added "Classification of Evidence Levels" and "Recommendation Ratings" as advised (see Page 7-8, Line146-170).

Changes in the text:

(1) Classification of Evidence Levels

Level 1: RCT or other type of experimental study.

1a-systematic review of multiple RCTs; 1b-systematic review of one or more RCTs and other intervention studies; 1c-single RCT

Level 2: experimental study

2a-systematic review of multiple quasi-experimental studies; 2b-systematic review of multiple quasi-experimental and other low-quality interventional studies; 2c-single prospective quasi-experimental study with a control group

Level 3: Observational and analytical study

3a-systematic review of multiple cohort studies; 3b-systematic review of multiple cohort studies versus other low-quality observational studies; 3c-single cohort study with a control group

Level 4: Observational - Descriptive study

4a-systematic review of multiple descriptive studies; 4b-single-item cross-sectional study; 4c-pathological series study

Level 5: Expert opinion, basic research

5a-systematic review of a pair of expert opinions; 5b-expert consensus; 5c-basic research, single expert opinion

(2) Recommendation Ratings

A: Strongly recommended because supported by adequate evidence.

B: Weakly recommended because supported by some evidence

Reviewer B

Comment 3: Methods- retrieval strategy section

I feel these key words "NIV/NIPPV/CPAP/HFNC" need to be expanded as high-flow nasal cannula, positive pressure ventilation may result in a slightly different result.

I noted that this below review published in Nov 2022 was not included which specifically addressed nasal interface and nasal injuries.

- Prakash R, De Paoli AG, Oddie SJ, Davis PG, McGuire W. Masks versus prongs as interfaces for nasal continuous positive airway pressure in preterm infants. Cochrane Database of

Systematic Reviews 2022, Issue 11. Art. No.: CD015129. DOI: 10.1002/14651858.CD015129. Accessed 10 November 2023.

Need a better formulated question

Reply 3: "HFNC" is the abbreviation of "high-flow nasal cannula" in the search term, which can ensure that the same literature is retrieved. Meanwhile, the mentioned article, which can be retrieved through the search strategy, was accidentally excluded during the literature screening process. Therefore, we decided not to expand the search terms after repeated discussions, and now we have added this article to the study, thank you for your professional comments. (see Page 10, 13; Line182, 219).

Changes in the text: ① The "results of literature screening" was revised, and 16 articles were included, of which six were systematic reviews.

② The "summary of evidence" has been updated, "Use of masks compared with prongs as the nasal CPAP interface may reduce treatment failure and nasal injury" was added as new evidence.

Comment 4: Literature inclusion and exclusion criteria.

Please explain in the text rationale behind excluding updated guidelines and systematic review adopted by guideline.

Reply 4: The previous description was somewhat ambiguous. In fact, systematic reviews were excluded if all available evidence related to this study was in the guidelines, and the most recent guidelines were included if they were updated by the same organization or individual. We have modified our text as advised (see Page 5, Line104-107).

Changes in the text: (III)for systematic reviews cited by guidelines, systematic reviews were excluded if all available evidence related to this study was in the guidelines; (IV)the most recent guidelines were included if they were updated by the same organization or individual.

Comment 5: Table 3.

Despite the higher risk of HFNC treatment failure, considering that there's no difference in intubation rate between HFNC and CPAP, and the incidence of nasal injury is lower, it's suggested to use HFNC as primary respiratory support for preterm infants (5, 23).

I feel this statement is may project a wrong message. I agree there is less risk of nasal injury with HFNC. But there is insufficient evidence for HFNC in preterm infants < 28 weeks. CPAP is still the standard primary respiratory support for preterm infants as per all major international guidelines.

Reply 5: Thanks to the experts' rigorous review of the evidence. Considering that there is insufficient evidence for the application of HFNC in preterm infants < 28 weeks, We have modified our text as advised (see Page 13, Line219)

Changes in the text: The evidence NO.3 is deleted.