INPLASY

Impact of Different Mouthwashes on Oral Care for Critically Ill Patients Prior to Extubation: A Network Meta-Analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023120028

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 December 2023 and was last updated on 06 December 2023.

INTRODUCTION

Review question / Objective Systematically evaluate and compare the efficacy and safety of commonly used mouthwashes for oral care in mechanically ventilated ICU patients.

Condition being studied Maintaining oral hygiene with mouthwash solutions is recognized as a crucial measure to prevent ventilator-associated pneumonia, a serious ICU complication.Despite the widespread use of various mouthwashes like saline, chlorhexidine, sodium bicarbonate, and others, evidence regarding their relative effectiveness in reducing VAP incidence remains inconclusive.

METHODS

Participant or population In ventilated intensive care unit patients.

Intervention Despite the widespread use of various mouthwashes like saline, chlorhexidine, sodium bicarbonate, and others, evidence regarding their relative effectiveness in reducing VAP incidence remains inconclusive.

Comparator Saline, chlorhexidine , sodium bicarbonate, oxidizing agents, and herbal extracts for oral care in ventilated intensive care unit patients..

Study designs to be included Network meta-analysis was conducted to synthesize direct and indirect evidence.

Eligibility criteria Randomized controlled trials pertinent to our research question were included.

The inclusion criteria were: (1) conducted in mechanically ventilated intensive care unit patients; (2) comparing different mouthwash solutions for oral care including saline, chlorhexidine, sodium bicarbonate, oxidizing agents, and herbal extracts; (3) reporting at least one outcome of our interest, including ventilator-associated pneumonia incidence, intensive care unit mortality, duration of ventilation, intensive care unit length of stay, and adverse events. Non-randomized studies and those with incomplete data were excluded.

Information sources PubMed, Web of Science, Embase and Cochrane Library.

Main outcome(s) Outcomes included ventilator-associated pneumonia incidence, intensive care unit mortality, duration of ventilation, intensive care unit length of stay, and adverse events.

Quality assessment / Risk of bias analysis The Cochrane Risk of Bias Tool was used by two reviewers to assess the risk of bias in terms of random sequence generation, allocation concealment, blinding, incomplete data, and selective reporting. Disagreements were resolved by discussion or consulting a third reviewer.

Strategy of data synthesis Network meta-analysis was performed using R software. Conventional pairwise meta-analysis was first conducted. The I2 test was used to assess heterogeneity across studies, with I2 > 50% indicating significant heterogeneity.

Subgroup analysis None.

Sensitivity analysis None.

Country(ies) involved China.

Keywords Intensive Care Units;Mouthwashes; Meta-analysis; Oral Hygiene;Ventilator associated pneumonia.

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