

INPLASY PROTOCOL

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None declared.

The Efficacy of Gastric Aspiration in Reducing Postoperative Vomiting After Oral and Maxillofacial Surgery: A Meta-analysis

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Review question / Objective: Our study aimed to determine the role of gastric aspiration in the amelioration of postoperative vomiting (POV) by a meta-analysis.

Eligibility criteria: The trials were considered for inclusion if they met the following criteria: (1) randomized controlled trial, (2) trials investigating the effects on reducing vomiting in oral and maxillofacial surgeries, (3) descriptions of postoperative vomiting as the main outcome, and (4) full English text. The following criteria were regarded as exclusion criteria: (1) non-RCTs, (2) investigations on other surgeries, (3) trials with insufficient raw data, (4) no full English text, and (5) irrelevant studies, reviews, comments and editorials.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 February 2023 and was last updated on 04 February 2023 (registration number INPLASY202320016).

INTRODUCTION

Review question / Objective: Our study aimed to determine the role of gastric aspiration in the amelioration of postoperative vomiting (POV) by a meta-analysis.

Condition being studied: The application of gastric aspiration in oral and maxillofacial surgeries.

METHODS

Participant or population: The patients who underwent the oral and maxillofacial procedures.

Intervention: Gastric aspiration.

Comparator: No gastric aspiration.

Study designs to be included: Randomized controlled trial

Eligibility criteria: The trials were considered for inclusion if they met the following criteria: (1) randomized controlled trial, (2) trials investigating the effects on reducing vomiting in oral and maxillofacial surgeries, (3) descriptions of postoperative vomiting as the main outcome, and (4) full English text. The following criteria were regarded as exclusion criteria: (1) non-RCTs, (2) investigations on other surgeries, (3) trials with insufficient raw data, (4) no full English text, and (5) irrelevant studies, reviews, comments and editorials.

Information sources: PubMed, Embase and Cochrane Central.

Main outcome(s): (1) the incidence of of POV; (2) the number of episodes of POV; (3) the frequency of rescue antiemetic use.

Quality assessment / Risk of bias analysis: All included trials were assessed by the Jadad scoring system (ranging from 0 to 5 points) to determine their quality regarding methodological process by rating as high-quality (3 to 5 points) or low-quality (0 to 2 points). The risk of bias for each included trial was also conducted according to the Cochrane Risk of Bias assessment tool. Funnel plots and Egger's test were used to assess the potential bias.

Strategy of data synthesis: For the calculation of dichotomous variables regarding selected parameters, the risk ratio (RR) and its 95% confidence interval (CI) based on quantitative analysis were the final outcome to present the effects of gastric aspiration on the risk of emesis and the possibility of antiemetics use. The fluctuation of total episodes of vomiting between the gastric aspiration group and the control group is presented as the standard mean difference (SMD) with the associated 95% CI. Heterogeneity was calculated with the I² test ranging from 0 to 100%. A random-effects model was applied if high heterogeneity (> 50%) was detected. For those results with low heterogeneity (<

50%), outcomes were calculated based on a fixed-effects model.

Subgroup analysis: NA.

Sensitivity analysis: NA.

Language restriction: English.

Country(ies) involved: China.

Keywords: Gastric aspiration, Oral and maxillofacial surgery, Postoperative vomiting.

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