In this meta-analysis, we investigated the use of an intraoperative or postoperative infusion of dextrose for the prevention of postoperative nausea and vomiting” Zorrilla-Vaca et al (2019).

**Abstract:**

**BACKGROUND:** Perioperative IV dextrose infusions have been investigated for their potential to reduce the risk of postoperative nausea and vomiting. In this meta-analysis, we investigated the use of an intraoperative or postoperative infusion of dextrose for the prevention of postoperative nausea and vomiting.

**METHODS:** Our group searched PubMed, Embase, Cochrane library, and Google Scholar for relevant randomized controlled trials examining the use of perioperative IV dextrose for prevention of postoperative nausea and vomiting. The primary outcome was the incidence of postoperative nausea and vomiting (both in the postanesthesia care unit and within the first 24 h of surgery). Secondary outcomes included postoperative antiemetic administration and serum glucose level.

**RESULTS:** Our search yielded a total of 10 randomized controlled trials (n = 987 patients) comparing the use of a perioperative dextrose infusion (n = 465) to control (n = 522). Perioperative dextrose infusion was not associated with a significant reduction in postoperative nausea and vomiting in the postanesthesia care unit (risk ratio = 0.91, 95% CI, 0.73-1.15; P = .44) or within the first 24 h (risk ratio = 0.76, 95% CI, 0.55-1.04; P = .09) of surgery. Although the use of dextrose was associated with a significant reduction in antiemetic administration within the first 24 h (risk ratio = 0.55, 95% CI, 0.45-0.69; P < .001), it also increased postoperative plasma glucose levels compared to controls.

**CONCLUSIONS:** The use of perioperative dextrose did not result in a statistically significant association with postoperative nausea and vomiting. When utilized, plasma glucose monitoring is recommended to assess for postoperative hyperglycemia. Further prospective trials are necessary to examine the potential impact of timing of administration of a dextrose infusion on incidence of postoperative nausea and vomiting and rescue antiemetic requirements.

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