

THE RELATIONSHIP OF PRE-OPERATIVE FASTING DURATION AND SURGERY DURATION WITH THE EVENT OF POST-OPERATIVE NAUSEA AND VOMITING IN GENERAL ANESTHESIA PATIENTS

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ABSTRACT

Postoperative Nausea and Vomiting (PONV) is one of the most common postoperative complications among patients undergoing general anesthesia. This condition may cause discomfort, delay the recovery process, and increase the risk of further complications. Prolonged preoperative fasting and longer surgical duration are suspected to contribute to a higher incidence of PONV. This study aimed to analyze the relationship between preoperative fasting duration and surgical duration with the incidence of PONV in patients undergoing general anesthesia at Karsa Husada Regional Hospital, Batu. This research employed a quantitative method with a cross-sectional design involving 60 respondents selected through purposive sampling. Data were collected using an observation sheet and the Rhodes Index of Nausea, Vomiting, and Retching (RINVR) instrument. Data analysis using Spearman's Rank test and Quantile Regression showed that both variables were significantly associated with PONV incidence ($p < 0.001$). The Quantile Regression model at the median ($q = 0.5$) produced a Pseudo R^2 value of 0.180, indicating that 18% of the variation in PONV scores was explained by the two variables, while the remaining variation was influenced by other factors. Preoperative fasting duration had the most dominant effect ($B = 0.644$; $p < 0.001$) compared to surgical duration ($B = 0.036$; $p = 0.007$). These results indicate that prolonged preoperative fasting contributes more significantly to the increase in PONV incidence than surgical duration. Prolonged fasting may lead to hypoglycemia, electrolyte imbalance, and increased gastric acid secretion, which stimulate the Chemoreceptor Trigger Zone (CTZ) and the vomiting center in the brainstem, thereby heightening sensitivity to postoperative nausea and vomiting.

Keywords: Preoperative fasting duration, Surgical duration, PONV