

Evaluation and management of postoperative nausea and vomiting

Students:

Alla Nader

Bayan Ghazal

Supervisor:

Dr. Samah Al- Jabi

Dr. Sa'ed Zyoud

Abstract:

Introduction: Nausea and emetic episodes are common complaints following anaesthesia and surgery and are among the leading cause to decrease patient satisfaction after surgery.

Objectives of the study: To Recognize a predictive risk factors that would be unique in the Palestinian population, quantification of the relative impact of the risk factors on postoperative nausea and vomiting (PONV) and to develop a model to stratify risk categories and identify those patients at higher risk for PONV .

Method: We enrolled a sample of inpatients over 18 years old from 1 July to 1 November 2012 in this prospective observational cohort study. The patients were interviewed 6 hr and 24 hr postoperatively using a data collection form concerning the patient's subjective sensation of feeling sick or wishing to vomit and PONV intensity scale. Logistic regression analysis was performed to predict the occurrence of PONV

Results: One hundred and fifty nine (39.8%) out of the 400 patients who were included in the study had experienced PONV during their hospital stay. Using a univariate analysis female gender ($P=0.014$), Previous PONV ($P=0.001$), Post-operative opioid use ($P=0.003$) and propofol use ($P=.043$) were the main predictors in assessing PONV. And it showed that the use of propofol may significantly reduce the risk of PONV ($p = 0.043$).

The results of the binary logistic regression analysis showed that the occurrence of PONV was 1.7 times higher in females comparing to males. In addition, the odds of PONV were 2.5 times higher in patients who had had a previous PONV, and 2.2 times higher in patients who used opioids post-operation. On the other hand, using propofol in anesthetic medication regimen could reduce the risk of the occurrence of PONV by 50%.

Using the binary logistic regression we developed this equation for calculating the overall risk of PONV: $P(\text{probability of PONV}) = 1 / (1 + e^{-Z})$ /Where $Z = 0.517(\text{gender}) + 0.910(\text{history}) + 0.784(\text{use of post-operative opioid}) - 0.624(\text{Propofol use})$. [Gender: female=1, male=0; history of previous PONV or motion sickness: yes=1, no=0; use of post-operative opioid: yes=1, no=0; use of propofol yes=1, no=0]

Conclusion: The occurrence of PONV is common with a percentage of 39.8%, the major predictive risk factors for PONV in the Palestinian population were identified which are female gender, history of PONV, post-operative opioid use and the use of propofol .In addition, a predictive model has been developed for assessing PONV among a group of Palestinian patients.

