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The Relationship of Risk Factors With The Incidence Of Postoperative Nausea And Vomiting In Patients who underwent surgery with General Anesthesia at Rsi Siti Rahmah

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ABSTRACT

To know the characteristics of general anesthesia patients, to know the degree of PONV, and to know the relationship between patient, intraoperative, and postoperative risk factors who experience PONV in patients undergoing surgery under anesthesia general.The type of this research used is analytic observational with a cross-sectional approach. The affordable population in this study were all general anesthesia patients at Siti Rahmah Hospital Padang with 65 samples using a consecutive sampling technique. Analysis of univariate and bivariate data presented in the form of frequency and percentage distributions, data processing using the Kolgomorov Smirnov test statistical test. General anesthesia patients aged 26-35 years (24.6%), female (56.9%), no smoking history (89.2%), surgical oncology (47.7%), 60 minutes duration (67.7%), mild pain (38.5%), opioid use (92.3%). Grade 0 PONV (87.6%). The relationship of risk factors for patients experiencing PONV with age p = 0.288, gender p = 0.997, motion sickness p = 0.443, smoking history p = 0.958. Relationship of intraoperative risk factors for PONV with type of surgery p = 1,000, duration of surgery p = 0,978. The relationship between postoperative risk factors for experiencing PONV with opioid use p = 1,000, pain degree p = 1,000. Most general anesthesia patients were aged 26-35 years, most gender was female, most motion history was no history, most smoking history ie no history, the most type of surgery is oncology, the most duration is 60 minutes, the most opioid use is using, the highest degree of pain is mild.

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INTRODUCTION

General anesthesia is a medical procedure that aims to relieve pain in the patient, make the patient lose consciousness, the patient also experiences temporary or reversible amnesia, and can be expected which is also called anesthesia or narcotics. General anesthesia has three pillars or the so-called triad of anesthesia, namely sedative or hypnotic which means making the patient calm or asleep, analgesia which means loss of pain sensation, and muscle relaxant which means paralysis of skeletal muscles (Purnomo et al, 2015).

Tens of millions of patients are estimated to receive general anesthesia in the process of surgery. General anesthesia can be administered intravenously, intramuscularly and by inhalation or through gas. The group of drugs used in undergoing general anesthesia procedures are hypnotics, analgesics, and muscle relaxants. General anesthesia has side effects on patients, during the first 24 hours post anesthesia in outpatient surgery patients, namely, nausea (10-40%), vomiting (10-20%), incision pain (30%), sore throat (25%) . Nausea and vomiting can be very dangerous because it can cause asphyxia, hypoxia, and hypercapnia because gastric contents can cause aspiration, and there are 1:100,000 cases of death caused by general anesthesia (Cook et al, 2011).

Postoperative nausea and vomiting (PONV) is a common complication that interferes with patient comfort after surgery and anesthesia which can cause dehydration, electrolyte imbalance, reopening of wounds, pulmonary aspiration and delayed discharge from the hospital. Due to late discharge from the hospital, the costs increased. PONV can partially go away on its own but causes postoperative discomfort and dissatisfaction, and can even lead to serious complications. Complications that can be caused are in the form of medical and psychological complications so that they can hinder the effectiveness of therapy and reduce the rate of healing (Gan et al, 2020)

PONV is a complex physiological phenomenon involving central and peripheral receptor mechanisms and several neurophysiological pathways. The medulla is the vomiting center as the main control of the nausea and vomiting reflex. Five major receptor systems are involved in PONV, the chemoreceptor trigger zone, vagal mucosal pathways in the gastrointestinal testicular system, reflex afferent pathways from the cerebral cortex, neural pathways from the vestibular system, and midbrain afferents. If one of these afferents is stimulated, it can activate the vomiting center through cholinergic, dopaminergic, histaminergic, or serotonergic receptors (Piere and Wellan, 2013).

The prevalence of PONV in some Indonesian hospitals has been recorded at 27.08% to 31%. Research on the incidence of nausea and vomiting using the Apfel score at the dr. Hasan Sadikin Bandung conducted in 2018 found that out of 100 patients, 42% were obtained. Arisdiani T and Asyrofi A's research conducted in 2019 mostly felt nausea within 2-4 hours in the last 12 hours there were 30 respondents (50%), felt nausea 1-2 times in the last 12 hours there were 31 respondents (51.7%), who did not experience vomiting in the last 12 hours there were 43 respondents (71.7%). Giving statements vomiting 1-2 times in the last 12 hours there are 13 respondents (21.7%) and statements vomiting 3-4 times in the last 12 hours there are 4 respondents (6.7%). Most of the respondents who experienced vomiting were <The majority of patients in this study underwent minor oral surgery (56.6%), of the 372 patients enrolled in the study, 44.6% were male (166/372) and 55.4% were female (206/372). , the overall incidence of PONV was 25.3% (94/372) (Hendro et al, 2018).

PONV risk factors consist of patient factors, intraoperative factors, and postoperative factors. Patient factors were gender, motion sickness, smoking, and age. Intraoperative factors were type of surgery, duration of surgery, general anesthesia, and spinal anesthesia. Postoperative factors are pain, ambulation, and opioids. Women have a higher risk than men. This is because the hormones that women have are always changing. A study proves that women with menstrual cycles in the follicular phase are more at risk for experiencing PONV. In patients who do not smoke there is an increase while the decrease in the incidence of PONV in patients with smokers is due to changes in neuroreceptors due to nicotine exposure in cigarettes (Saikh et al, 2016).

Not all of the risk factors found in PONV show the same effect on different populations. The more risk factors a population has, the higher the incidence of PONV. Therefore, researchers are interested in seeing the relationship between PONV risk factors and PONV complaints in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital, Padang.

RESEARCH METHOD

This research covers the field of anesthesia. This research will be conducted inRSI Siti Rahmah Padang, West Sumatra Province from November-December 2021. This study was an analytical observational and cross-sectional study in patients undergoing surgery under general anesthesia inRSI Siti Rahmah Padangin 2021. The population of this study were all patients undergoing surgery under general anesthesia at theRSI Siti Rahmah Padangin 2021. Affordable populationThis is a patient under general anesthesia who underwent surgery at theRSI Siti Rahmah Padangin 2021.

The sampling method was chosen using a consecutive sampling technique, the sampling was by selecting samples that met the research criteria for a certain period of time so that the number of samples was met. The sample size is 65 samples, the sample size is calculated based onThe independent variables in this study were patient risk factors, intraoperative risk factors, and postoperative risk factors for PONV. The dependent variable in the study was patients who had PONV.The data collection tools used were patient observation sheets and patient medical record data. The data taken were primary data, namely the examination was carried out by the researcher himself by interviewing the patient and secondary data, namely looking at the patient's medical record data. Data analysis in this study is described using the SPSS (Statistics Product and Service Solutions) application. Univariate analysis was conducted to determine the frequency distribution of PONV events under general anesthesia and bivariate analysis was performed to see how strong the relationship between the dependent variable and the independent variable was on the incidence of PONV under general anesthesia. The test carried out in this study was the Kolmogrov-Smirnov test using SPSS.

RESULTS AND DISCUSSIONS

Results

Research results about the relationship of risk factors with the incidence of PONV in patients undergoing surgery under general anesthesia at Siti Rahamah Hospital,of 65 samples, researchers can describe as follows:

Frequency distributionpatients who underwent surgery under general anesthesia at Siti Rahmah Hospital based on age, the most patient groups in the 26-35 year age category were 16 patients with a percentage of 24.6%. Frequency distributionpatients who underwent surgery under general anesthesia at Siti Rahmah Hospital based on gender, in the female gender category, 37 patients with a percentage of 56.9% were obtained and for the male gender category there were 28 patients with a percentage of 43.1%.

Frequency distributionpatients who underwent surgery under general anesthesia at Siti Rahmah Hospital based on the patient's smoking history, in the category with a history of smoking obtained as many as 15 patients with a percentage of 23.1% and for the category of no smoking history as many as 50 patients with a percentage of 76.9%. Frequency distributionpatients undergoing surgery under general anesthesia at Siti Rahmah Hospital based on motion sickness, in the categoryhistory of motion sicknessobtained as many as 7 patients with a percentage of 10.8% and for the category of nonehistory of motion sicknessas many as 58 patients with a percentage of 89.2%.

Frequency distributionpatients who underwent surgery under general anesthesia at Siti Rahmah Hospital based on the patient's surgery, the largest patient group was in the categorysurgerycategoryoncology surgeryobtained as many as 31 patients with a percentage of 47.7%. Frequency distributionpatients who underwent surgery under general anesthesia at Siti

Rahmah Hospital based on the duration of the patient's operation, the largest group was in the category60 minutesobtained as many as 44 patients with a percentage of 67.7%.

Frequency distributionpatients undergoing surgery under general anesthesia at Siti Rahmah Hospital based on the patient's degree of pain, the highest group was in the categorymild painas many as 25 patients with a percentage of 38.5%. Frequency distributionpatients undergoing surgery under general anesthesia at Siti Rahmah Hospital based on opioid use, the largest group in the category isuse of opioidsobtained as many as 60 patients with a percentage of 92.3%. PONV frequency distribution onpatients undergoing surgery under general anesthesia at Siti Rahmah Hospital, in the categorydegrees 0obtained as many as 57 patients with a percentage of 87.7%, categorydegree 1as many as 4 patients with a percentage of 6.2%, categorydegree 2as many as 2 patients with a percentage of 3.1%, categorydegree 3as many as 2 patients with a percentage of 3.1% and the categorydegree 4as many as 0 patients with a percentage of 0%.

Statistical analysis to determine the relationship between age and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. Statistical test results obtained p value of 0.288. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no relationshipthe age of the patient with the degree of PONV of the patient who underwent surgery under general anesthesia at Siti Rahmah Hospital. Ha in this study is rejected and H0 is accepted. Statistical analysis to find outThe relationship between sex and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.997. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no hrelationshipgender of patients with the degree of PONV patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

Statistical analysis to find outrelationship between motion sickness and the degree of PONV in patientswho underwent surgery under general anesthesia at Siti Rahmah Hospital using SPSS v. 25 using the Kolmogorov-Smirnov method. Statistical test results obtained p value of 0.443. Based on the considerations that have been determined that there are hthe relationship between variables if $P < 0.05$. That is, there is no hrelationshipmotion sickness of patients with PONV degree patients undergoing surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

Statistical analysis to find outThe relationship between smoking history and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.958. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no hrelationshipsmoking history of patients with PONV degree patients who underwent surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted. Statistical analysis to find outThe relationship between surgery and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no hrelationshipsurgery for patients with PONV degree patients who underwent surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

Statistical analysis to find outThe relationship between the duration of surgery and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.978. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no hrelationshipduration of operation of patients with the degree

of PONV of patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

Statistical analysis to find outrelationship between opioid use and the degree of PONV in patients withwho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000.Based on the considerations that have been determined that there are hthe relationship between variables if P < 0.05. That is, there is no hrelationshipthe use of opioids in patients with a degree of PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted. Statistical analysis to find outThe relationship between the degree of pain and the degree of PONV in patientswho underwent surgery under general anesthesia at Siti Rahmah Hospital using SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000.Based on the considerations that have been determined that there are hthe relationship between variables if P < 0.05. That is, there is no hrelationshipthe degree of pain with the degree of PONV of patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

Discussions

A. **CharacteristicsPatients Undergoing Surgery with General Anesthesia at Siti Rahmah Hospital, Padang**

The most characteristic age of the patients in this study was the age of 26-35 years with a total of 16 patients with a percentage of 24.6%. The female gender was more than the male gender, with 37 patients with a percentage of 56.9%. History of no smoking was more, ie 50 patients with a percentage of 76.9%. History of motion sickness in the category of no history of motion sickness was more than those with a history of motion sickness, namely 58 patients with a percentage of 89.2%. The category of surgery in the category of oncology surgery was more than other surgeries, namely as many as 14 patients with a percentage of 21.5%. The duration of surgery for patients was more in the 60 minute category with a percentage of 67.7%. The dominant pain degree was in the mild pain category, as many as 25 patients with a percentage of 38.

The results of Millizia et al's 2021 research onFactors associated with the incidence of PONV in general anesthesia patients at the Cut Meutia General Hospital, Aceh Utara showed rMost respondents were at the age of 18–31 years, as many as 37 respondents (43.0%) with the highest gender being female (Milliza et al, 2021) The same results were also found in the research of Ikhsan and Yunafri in a study entitledan overview of the incidence of PONV in patients undergoing inhalation anesthesia with isoflurane in October-December 2018 at RSU Putri Hijau Kindergarten. II KESDAM I/BB shows thatthe 18-24 year age group dominated the study sample with a total of 17 people, but the largest gender was male (Prasetyo & Ikhsan, 2020).

Number of patientsat a young agewho underwent surgery under general anesthesia because the younger age group tended to complain compared to the elderly patient. In this study, general anesthesia patients were dominated by oncology patients, which allowed young patients to complain easily (Prasetyo & Ikhsan, 2020). Pain is a sensation felt by postoperative patients accompanied by emotional responses and can cause physiological responses that can interfere with patient recovery such as tachycardia, decreased cough reflexes, increased oxygen consumption, and endocrine effects.(Veeringam, 2017). The use of opioids in this study was dominant in the category of opioid use as many as 60 patients with a percentage of 92.3%. The same results were found in the study of Millizia et al in 2021 showing resultspatients who use opioids are more than patients who do not use opioids, namely as many as 82 respondents (95.3%) (Milliza et al, 2021).

The use of opioids as a postoperative pain management that aims to speed up recovery with few side effects so that patients can speed up their discharge from the hospital. Opoids work by

binding to specific opoid receptors in the central nervous system that mimic the effects of the endogenous peptide neurotransmitter, opiopeptin.

B. Distribution of PONV Frequency in Patients Undergoing General Anesthesia Operations at Siti Rahmah Hospital, Padang

PONV frequency distribution onpatients undergoing surgery under general anesthesia at Siti Rahmah Hospital, in the categorydegrees 0obtained as many as 57 patients with a percentage of 87.7%, categorydegree 1as many as 4 patients with a percentage of 6.2%, categorydegree 2as many as 2 patients with a percentage of 3.1%, categorydegree 3as many as 2 patients with a percentage of 3.1% and the categorydegree 4as many as 0 patients with a percentage of 0%.

The degree of PONV in this study was dominated bygrade 0/no nausea and vomitingobtained as many as 57 patients with a percentage of 87.7%. The same results were found in Sholihah et al's 2015 studyIt was obtained from 96 patients who experienced PONV as many as 26 patients (27.08%) and who did not experience PONV as many as 70 patients (72.92%) (Sholihah and Husairi, 2015). This incidence rate is the same when compared to several studies conducted by Saeeda Islamin Sholihah 2015reported that the incidence of PONV ranged from 20-30%.On researchMillizia et al in 2021 in their research showed that patients who experienced PONV were 24 respondents (27.9%) and 62 respondents (72.1%) (Apfel et al, 2012).

The preparation for the operation was very good so that premedication drugs were given, especially anti-emetics such as ondansetron so that the patient did not experience postoperative nausea and vomiting.. Ondansetron is a 5-HT3 antagonist that is highly selective in suppressing nausea and vomiting. Centrally works to block the CTZ in the posterma area of the brain and block peripheral nerves at the vagus nerve endings by inhibiting serotonin binding at the vagus nerve endings, making it effective as a prevention of PONV, and a decrease in the degree of PONV (Nurwaningsih, 2009).

C. Relationship between Age and PONV Degree of Patients Undergoing Surgery with General Anesthesia at RSI Siti Rahmah

Statistical analysis to find outrelationship between age and degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. Statistical test results obtained p value of 0.288. Based on the considerations that have been determined that there is a relationship between variables if $P < 0.05$. That is, there is no hrelationshipthe age of the patient with the degree of PONV of the patient who underwent surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

Research conducted byMillizia et al in 2021 in their research found that age did not have a significant relationship with the incidence of PONV. This result is similar to the study conducted by Al-Ghanem et al in 2019 which found that the age of the patient was not significantly a predictor of the incidence of PONV even though the age of less than 40 years had a high rate of nausea (Al-Ghanem et al, 2019). The effect of age on the incidence of PONV is difficult to clarify, because the number of each age group is not evenly distributed which causes limited research, younger patients have neuronal responses that are more sensitive to stimuli transmitted to the brain stem and nausea and vomiting will occur and cause younger patients have a higher risk than older patients (Sholihah et al, 2015).

D. The Relationship of Sex with the Degree of PONV Patients Undergoing Surgery with General Anesthesia at Siti Rahmah Hospital

Statistical analysis to find outThe relationship between sex and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.997.

Based on the considerations that have been determined that there is a relationship between variables if P < 0.05. That is, there is no hrelationshipgender of patients with the degree of PONV patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

The results of the study by Millizia et al in 2021 showed that there was no significant relationship between gender and the incidence of PONV. Different results were found in Tifani's study in 2020 which showed there was a significant relationship between gender and the incidence of PONV (Fadila, 2020) Women are more likely to have PONV than men. It is the strongest patient-specific predictor. Women are two to four times more likely to experience PONV than men, due to fluctuating hormone levels with high risk in women occurring in the third and fourth weeks of the menstrual cycle and on the fourth and fifth days of menstruation. During the menstrual phase, follicle stimulating hormone (FSH), progesterone, and estrogen can affect the CTZ and the vomiting center which can lead to PONV. This incidence decreases in children before puberty and in postmenopausal women over 50 years old (Simurina et al, 2011).

E. The Relationship of Motion Sicknes with the Degree of PONV Patients Undergoing Surgery with General Anesthesia at Siti Rahmah Hospital

Statistical analysis to find outrelationship between motion sickness and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.443. Based on the considerations that have been determined that there is a relationship between variables if P < 0.05. That is, there is no hrelationshipmotion sickness of patients with PONV degree patients undergoing surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted. In this study, the number of patients who did not experience motion sickness was 58 out of 65 (89.2%) which could possibly affect the results of the study. Different results were found in the study of Milliza et al in 2021 which showed that there was a significant relationship between a history of motionsickness and the incidence of PONV. The release of catecholamines in patients who had a history of motionsickness would trigger alpha receptors in the vomiting center which caused nausea and vomiting (Milliza et al, 2021).

F. Relationship between smoking history and the degree of PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital

Statistical analysis to find outThe relationship between smoking history and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.958. Based on the considerations that have been determined that there is a relationship between variables if P < 0.05. That is, there is no hrelationshipsmoking history of patients with PONV degree patients who underwent surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

Different results were found in Millizia et al's study in 2021, the results of their researchshowed that there was a significant relationship between smoking history and the incidence of PONV.Different results were also found in Tifani's 2020 study which showed there was a significant relationship between smoking history and PONV.According to Farhat in 2014 that there is a protective effect of cigarettes onThe incidence of PONV is due to the induction of CYP1A2 and CYP2E1 enzymes caused by cigarette smoke. These changes cause an increase in the metabolism of anesthetic drugswhich are metabolized in the same pathway (Farhat et al., 2014)

G. The Relationship between Type of Surgery and the Degree of PONV Patients Undergoing Surgery with General Anesthesia at Siti Rahmah Hospital

Statistical analysis to find outThe relationship between surgery and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000. Based on the considerations that have been determined that there is a relationship between variables if P < 0.05. That is, there is no hrelationshipsurgery for patients with PONV degree patients who underwent surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

Similar results were found in the study of Millizia et al in 2021 which showed that there was no significant relationship between the type of surgery and the incidence of PONV. This result is similar to a study conducted by Apfel in 2012 which found that the type of surgery was not a strong risk factor for the occurrence of PONV. In the study, the anesthesia was not too long and had less ethmogenic effect, causing a low risk of PONV (Apfel et al, 2002).

H. The relationship between the duration of surgery and the degree of PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital

Statistical analysis to find outThe relationship between the duration of surgery and the degree of PONV in patientswho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of0.978. Based on the considerations that have been determined that there is a relationship between variables if P < 0.05. That is, there is no hrelationshipduration of operation of patients with the degree of PONV of patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

Different results were found in the study of Millizia et al in 2021 which found that there was a significant relationship between the duration of surgery and the incidence of PONV. Research by Tifani in 2020 showed that there was a significant relationship between the duration of surgery and PONV. The results of research conducted by Kim in 2013 stated that the duration of surgery had a significant relationship with the incidence of PONV (Fadila, 2020)

The long duration of surgery can make the patient unable to change position due to anesthesia and neuromuscular blockade. Lack of movement causes pooling of blood and a sensation of dizziness which can stimulate a vestibular imbalance. This imbalance may lead to activation of the CTZ because the vestibular nerve acts as an additional trigger of PONV. Meanwhile, in the study conducted, the duration of 60 minutes dominated the length of the operation duration so that it was possible to influence the results of the research conducted (Lim et al, 2016).

I. The Relationship between Opioid Use and the Degree of PONV in Patients Undergoing Surgery with General Anesthesia at Siti Rahmah Hospital

Statistical analysis to find outrelationship between opioid use and the degree of PONV in patients withwho underwent surgery under general anesthesia at RSI Siti Rahmahusing SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000.Based on the considerations that have been determined that there are hthe relationship between variables if P < 0.05. That is, there is no hrelationshipthe use of opioids in patients with a degree of PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital.Ha in this study is rejected and H0 is accepted.

The results in this study are the same as those found in the study of Millizia et al in 2021 which showed that no significant relationship was found with opioid use because opioid use is a clinical practice that is commonly used by almost all patients (95.4%) of patients using opioids (Milliza, 2021)

Different results were found in Lim et al in 2016 which stated that there was a significant relationship between opioid administration and the incidence of PONV.PThe use of opioids can cause a person to experience PONV. This is because opioids can activate the CTZ directly.

J. Correlation between the degree of pain and the degree of PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital

Statistical analysis to find outThe relationship between the degree of pain and the degree of PONV in patientswho underwent surgery under general anesthesia at Siti Rahmah Hospital using SPSS v. 25 using the Kolmogorov-Smirnov method. The results of statistical tests obtained p values of1,000.Based on the considerations that have been determined that there are hthe relationship between variables if P < 0.05. That is, there is no hrelationshipthe degree of pain with the degree of PONV of patients undergoing surgery under general anesthesia at Siti Rahmah . Hospital.Ha in this study is rejected and H0 is accepted.

Visceral or pelvic pain is a common cause of postoperative emesis as sudden movements, changes in position, transportation from the post-anesthesia recovery unit to the postoperative ward can trigger nausea and vomiting. In this study, the pain in general anesthesia patients felt by patients was often in the upper body or extremities, so it did not affect the condition of PONV in patients.

CONCLUSION

Based on the results of the research and the presentation of the discussion aboutThe relationship of risk factors with the incidence of PONV in patients undergoing surgery under general anesthesia at RSI Siti Rahamah, the following conclusions can be drawn; The most characteristic age of the patients in this study was the age of 26-35 years with a total of 16 patients with a percentage of 24.6%. The female gender was more than the male gender, with 37 patients with a percentage of 56.9%. History of no smoking was more, ie 50 patients with a percentage of 76.9%. History of motion sickness in the category of no history of motion sickness was more than those with a history of motion sickness, namely 58 patients with a percentage of 89.2%. The category of surgery in the category of oncology surgery was more than other surgeries, namely as many as 14 patients with a percentage of 21.5%. The duration of surgery for patients was more in the 60 minute category with a percentage of 67.7%. The dominant pain degree was in the mild pain category, as many as 25 patients with a percentage of 38, the degree of PONV in this study was dominated bygrade 0/no nausea and vomitingobtained as many as 57 patients with a percentage of 87.7%, the relationship of risk factors for patients experiencing PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital with ptaking into account that there is hrelationship between variables if P < 0.05there is no significant relationship with the p value of age of 0.288, p value of sex of 0.997, p value of motion sickness of 0.443, p value of smoking history of 0.958.Ha in this study is rejected and H0 is accepted, the relationship of intraoperative risk factors with PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital Padang with ptaking into account that there is hthe relationship between variables if P < 0.05 there is no significant relationship with the P value of the type of operation 1,000, the p value of the operation duplication is 0.978.Ha in this study is rejected and H0 is accepted, the relationship of postoperative risk factors experiencing PONV in patients undergoing surgery under general anesthesia at Siti Rahmah Hospital Padang with ptaking into account that there is hthe relationship between variables if P < 0.05 there is no significant relationship with the p value of the use of opioids of 1,000, p value of the degree of pain of 1,000. Ha in this study is rejected and H0 is accepted.

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