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Research Article

The Effectiveness of Position Arrangements on the Length of Recovery of Patients' Consciousness Level with General Anesthesia in the Recovery Room of RSUD Matraman

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Abstract

Aims : This study aims to determine the effectiveness of semi-Fowler's and lateral positioning on the length of recovery of consciousness in patients with general anesthesia.

Methods : A sample of 60 respondents was carried out using an independent T test with a significance of $\alpha = 0.05$. If the test results in this study have an effect then it is obtained (p value < 0.05). Researchers will carry out the Normality Test and Homogeneity Test as a condition in the independent T test.

Results : Researchers found that a patient's position changes how long it takes for them to wake up after surgery with general anesthesia by 87%. The largest number of respondents (35%) were between the ages of 36 and 40. This was followed by the age range of 26 to 30 years, with 16 respondents (26.7%), the age range of 20 to 25 years, with 13 respondents (21.6%), and the age range of 31 to 35 years, with at least 10 respondents (16.7%). Body temperature had a big effect on how long it took for people with general anesthesia to get better after surgery. The speed or length of a patient's return to awareness after surgery depends on the type of general anesthetic drug used. Studies show that the most widely used drug is propofol + ketamine + midazolam, followed by propofol + midazolam and fentanyl. Most of the time, a slow recovery is caused by leftover anesthetics, sedatives, or painkillers. A drug overdose can also make it take longer for a person to wake up.

Conclusion : Researchers found that a patient's position and body temperature had a big effect on how long it took for them to wake up after surgery with general anesthesia. The most widely used drug is propofol + ketamine + midazolam, followed by propofol + midazolam and fentanyl. Slow recovery is caused by leftover anesthetics, sedatives, or painkillers.

Keywords

Positioning, Recovery, Operations, Recovery Room

INTRODUCTION

Postoperative nursing care is the final period of perioperative nursing, where the nursing process is aimed at stabilizing the patient's condition in a state of physiological equilibrium, eliminating pain and preventing complications. Patients are transferred with special attention to maintain the comfort and safety of drainage hoses and equipment by handling them carefully for optimal function (1,2).

Surgery is an option to overcome disease or health problems in modern medical practice. Surgery aims to save lives, prevent disability and complications. World Health Organization (WHO) data shows that for more than a century surgical care has become an important component of healthcare worldwide (3,4)

Surgery is an invasive medical treatment performed to diagnose or treat disease, injury or body deformity (5). In the Russian Federation, the country has performed the most surgical procedures in 2019, the prevalence of surgical procedures is 10 million patients. Surgery in Indonesia ranks 11th out of the first 50 treatments for disease patterns in hospitals in Indonesia, an estimated 32% of which are laparotomy surgeries. Based on the results of Basic Health Research the rate of action with General Anesthesia in Indonesia was 17.6%, the highest was in the DKI Jakarta area at 31.3% and the lowest was in Papua at 6.7%. The number of hospitals in East Jakarta that carry out response time for cyto surgery services within ≤ 30 minutes is 132 hospitals with a presentation of 68%. At the Matraman Hospital from January to August 2022, 800 patients underwent surgery, 80% with General Anesthesia and 20% Regional Anesthesia (6,7).

Seeing the phenomenon above, proper treatment is needed for a nurse to help a patient recover consciously to ensure the patient's stable condition before returning to the room without leaving residual effects of anesthesia on the patient. So the authors

are interested in taking the research title "Effectiveness of positioning on the length of recovery of the level of consciousness of patients with general anesthesia in the recovery room of Matraman Hospital in 2022.

METHODS

This type of research is a pre-experimental design, with a static group comparison design (Statis Group Comparison), namely research on groups that have had interventions, and compared them with other groups that have received different treatment (8). In this case, a study was conducted on postoperative patients under general anesthesia in the recovery room, by comparing the recovery of consciousness between patients who were placed in the semi-Fowler's position and in the lateral position.

Population is the entire object/subject studied. The population does not only involve people or living things, the population can be in the form of people, objects or any object which can be obtained or can provide information (data) related to the research topic (9). The population taken in this study was the total number of postoperative patients with general anesthesia in the Recovery Room of the Matraman Hospital in November - December 2022, namely 150 patients.

The sample is part of the number and characteristics possessed by the population and its aspects (10). The sampling technique in this study used a probability sampling technique, which is sampling that is given equal opportunities or opportunities for each element or member of the population to be selected as a sample, namely by the number of samples.

Based on this theory, the researchers used a minimum sample of 60 patients in this study. In this study, inclusion and exclusion criteria were determined in sample selection to control for variables that had nothing to do with the study and minimize bias.

RESULTS

Univariate analysis

Table 1. Distribution of Respondent Characteristics by Age in the Recovery Room of Matraman Hospital November – December 2022 with (n=60)

Variable	Categorical	Total	
		n	%
Age	20 – 25	13	21,6
	26 – 30	16	26,7
	31 – 35	10	16,7
	36 – 40	21	35,0

Analysis results according to the age distribution of the most respondents in the age range 36-40 years as many as 21 respondents (35.0%), followed by the age range 26-30 years with 16 respondents (26.7%), age range 20-25 years with 13 respondents (21.6%), at least 10 respondents (16.7%) in the age range of 31-35 years.

Table 2. Distribution of Respondent Characteristics Based on Body Temperature in the Recovery Room of Matraman Hospital in November - December 2022 with (n = 60)

Variable	Categorical	Total	
		n	%
Body temperature	< 36,5	14	23,3
	36,5 – 37,5	46	76,7
	> 37,5	0	0

Based on the distribution of body temperature, the most respondents with a body temperature of 36.5 – 37.5 were 46 respondents (76.7%) while body temperature <36.5 were 14 respondents (23.3%) and there were no respondents with a temperature > 37.5.

Table 3. Distribution of Respondent Characteristics Based on Types of General Anesthesia Drugs in the Recovery Room of Matraman Hospital in November – December 2022 with (n = 60)

Variable	Categorical	Total	
		n	%
Types of General Anesthesia	Propofol	6	10,0
	Propofol + Ketamine	21	35,0
	Propofol + Midazolam	11	18,3

Based on the distribution of types of general anesthetic drugs, the respondents recorded the most use of propofol + ketamine + midazolam in the amount of 22 respondents (37.7%), then using propofol + ketamine in the number of 21 respondents (35.0%), followed by using propofol + midazolam in the amount of 11 respondents (18.3%) and the least used propofol were 6 respondents (10.0%).

Bivariate Analysis

Table 4. Differences in the Types of Position Arrangements and Patient Recovery Time in the Recovery Room of the Matraman Hospital in November - December 2022 with (n=60)

Position	Mean	SD	95% Confidence Interval	P-value
Semi Fowler	10,47	2,240	9,50 - 7,10	0,001
Lateral	18,77	2,402	4,39 - 2,74	

Based on Table 4, it was found that the average semi-fowler position was 10.47 and the lateral position was 18.77. And the result is a p-value of 0.001, so there is a difference in recovery time between the semi-fowler and lateral positions.

Table 5. Relationship between Age and Recovery Time for Patients in the Recovery Room at the Matraman Hospital in November - December 2022 with (n=60)

Variable	Mean	SD	SE	P-value	n
Age	2,65	1,176	0,614	0,001	60

Based on Table 5, the results of the analysis of the relationship between age and recovery time show that the average age is 2.65 with a standard deviation of 1.176 and a p-value of 0.001.

Table 6. Effect of Body Temperature on Patient Recovery Time in the Recovery Room of Matraman Hospital in November - December 2022 with (n = 60)

Variable	Mean	SD	SE	P-value	n
Body temperature	1,77	0,427	-0,552	0,001	60

Based on Table 6, the results of the analysis of the effect of body temperature were obtained with an average recovery time of 1.77 with a standard deviation of 0.427 and a p-value of 0.001.

Table 7. Effect of Types of General Anesthesia Drugs on Patient Recovery Time in the Recovery Room of Matraman Hospital in November - December 2022 with (n = 60)

Variable	Mean	SD	SE	P-value	n
Types of General Anesthesia Drugs	2,82	1,049	0,464	0,001	60

Based on Table 7, the results of the analysis of the effect of general anesthetic drugs with an average recovery time of 2.82 with a standard deviation of 1.049 and a p-value of 0.001.

DISCUSSION

Setting the Position Regarding the Time of Recovery of the Level of Consciousness

Based on the distribution of recovery time, it was recorded that 30 respondents (50.0%) recovered within 5-15 minutes and 30 respondents (50.0%) recovered within 16-25 minutes. The results of research from (11) at Dr. Karyadi Semarang that positioning affects the recovery time of postoperative patient consciousness with general anesthesia by 87%. The data from the results of the analysis mean that the semi-fowler position is 10.47 and the lateral position is 18.77. And the results obtained were a p-value of 0.001, so there was a difference in recovery time between the semi-fowler and lateral positions. Statistical Test Results showed that p-value = 0.001. This means that the p-value < α . It can be concluded that semi-fowler positioning is more effective than lateral.

Age with time to recover conscious

The highest age distribution of respondents was in the age range 36-40 years with 21 respondents (35.0%), followed by the age range 26-30 years with 16 respondents (26.7%), in the age range 20-25 years with 13 respondents (21.6%), at least 10 respondents (16.7%) in the age range of 31 - 35 years. Research conducted by (12) in 2013 at the NTB Provincial General Hospital found that the recovery time is 30-40 years (65%). Another study by (13) at the Friendship General Hospital also stated that the recovery time for postoperative patients with general anesthesia was over the age of 40 years (73%). In accordance with the theory of (14) says that age can affect the long recovery of consciousness in postoperative patients because receptors in the body differ between children, adults and

the elderly. It can be concluded that age affects the long recovery time of postoperative patients with general anesthesia with an age range of over 40 years.

Body temperature with time to recover conscious

Based on the distribution of body temperature, the most respondents with a body temperature of 36.5 - 37.5 were 46 respondents (76.7%) while body temperature <36.5 were 14 respondents (23.3%) and there were no respondents with a temperature > 37.5. This is also in accordance with research conducted by Daru eko Srihayanti at Telogorejo Hospital Semarang that below normal temperature or hypothermia affects the length of time to recover consciousness of postoperative patients with general anesthesia, namely (14.7%). Other researchers also mentioned that normal body temperature can speed up the process of recovering consciousness in postoperative patients with general anesthesia by (83.2%) (15). Body temperature that is less than 36.5°C affects anesthesia and plays a major role in causing depression of the central nervous system and will hinder the process of restoring consciousness. (16) It can be concluded that below normal body temperature or hypothermia can affect the recovery time of postoperative patient consciousness with general anesthesia.

Type of General Anesthesia Drug with conscious recovery time

Based on the distribution of types of general anesthetic drugs, the respondents recorded the most using propofol + ketamine + midazolam in the amount of 22 respondents (37.7%), then using propofol + ketamine in the amount of 21 respondents (35.0%), followed by using propofol + midazolam in the amount of 11 respondents (18.3%) and the least used propofol were 6 respondents (10.0%). The results of the same research were conducted by (17,18) at Dr. Hasan Sadikin Bandung that the type of general anesthetic drug given affects the long time to

recover consciousness of postoperative patients with general anesthesia using propofol + ketamine + midazolam + fentanyl (53.5%). Other studies also state that the use of propofol alone or alone can have a quick recovery effect in patients (78.4%). The most common cause of delayed recovery is residual anesthetics, sedation or analgesics. It can also occur due to drug overdose either absolute or relative. Because the more drugs given, the more pressing the central nervous system will be and slowing down the process of recovering consciousness after surgery. (14) It can be concluded that the type of general anesthetic drug used affects the speed or duration of the patient's recovery of consciousness.

CONCLUSION

Based on the results of research that has been conducted on the effectiveness of positioning on the length of recovery of consciousness in patients with general anesthesia in the recovery room of Matraman Hospital in 2022, it can be concluded that: There is an effect of age on the length of recovery of consciousness in patients with general anesthesia in the recovery room of Matraman Hospital in 2022, Age of most respondents in the age range 36-40 years as many as 21 respondents (35.0%), and at least 10 respondents (16.7%) in the age range 31-35 years. There is an effect of the type of drug on the length of recovery of consciousness in patients with general anesthesia in the recovery room of Matraman Hospital in 2022, there is an effect of body temperature on the length of recovery of consciousness of patients with general anesthesia in the recovery room of Matraman Hospital in 2022, there is an effect of positioning on the length of recovery of consciousness in patients with general anesthesia in the recovery room of Matraman Hospital in 2022, the value $p = 0.001$ ($p < 0.05$), Semi-fowler's position is more effective than lateral position on the length of recovery of consciousness in patients with general anesthesia in the recovery room.

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