MULTIPLE CASE STUDY : PRE-ANESTHESIA ASSESSMENT IN AMBULATORY ANESTHESIA PATIENTS

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ABSTRACT
Background: Pre-anesthesia assessment is a procedure to assess the feasibility and preparation of a patient's medical condition before anesthesia. Ambulatory anesthesia is a medical service that does not require hospitalization after anesthesia.
Purpose: To identify case study of pre-anesthesia assessment in ambulatory anesthesia patients
Methods: This study employed descriptive qualitative with a case study approach with multiple case study design. The data were collected by using interview guide. There were 5 participants included in this study. The data were analyzed by using case analysis and cross-case analysis.
Results: The finding showed that 5 participants described the pre-anesthesia assessment of ambulatory anesthesia patients, namely anamnesis including identity assessment, surgical indications, and anesthetic focus data. Physical examination includes breathing, blood, brain, bladder, bowel, and bone. Diagnostic examination analysis included laboratory and radiology, ASA physical status assessment, anesthetic considerations, and special considerations including distance and access to the hospital from the hospital, as well as the responsibility of the patient, but the history of obstructive sleep apnea and special considerations were not assessed in detail.
Conclusion: The pre-anesthesia assessment of the outpatient anesthesia included participant anamnesis, physical examination, diagnostic examination, assessment of ASA physical status, and assessment of anesthesia, whereas a detailed study of obstructive sleep apnea and special considerations is not carried out.

Keywords: Ambulatory anesthesia, Assessment pre-anesthesia.

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INTRODUCTION

Pre-anesthesia assessment is a procedure performed to determine the feasibility and preparation of the patient's medical condition before anesthesia is performed. Anesthesiologists have an important task in doing so where the results of the assessment will be the basis for determining the anesthesia process that is safe and in accordance with the needs of the patient. Pre-anesthesia assessment in patients who will perform ambulatory anesthesia has differences with patients who undergo hospitalization. In patients who undergo day surgery have a more detailed assessment such as should only be done in patients with ASA I physical status and ASA II physical status (Walujo and Satya, 2020).

Over the past three decades, the increase in daily operations has continued to increase in various countries in the world (Ali et al., 2017). This can be seen from the advances in science and technology that greatly affect surgical techniques and anesthesia. More and more anesthesia procedures are performed in one day or known as ambulatory anesthesia. Ambulatory anesthesia is planned for patients who can be discharged on the same day without hospitalization (Arif Kurniawan, 2019). Ambulatory anesthesia procedures have also been implemented in several hospitals in Bali, one of which is Kertha Usada Hospital in the Buleleng area. According to data obtained from the Preliminary study that has been conducted, there are 705 patients undergoing this procedure from the period 2021 to 2022.

Ambulatory anesthesia is the administration of anesthesia to a patient who does not require post-anesthesia hospitalization but still requires post-anesthesia recovery facilities. The uniqueness of this procedure is the proper selection of patients in outpatient surgery patients (Rehatta Margarita and Hanidito Elizeus, 2019). According to Bailey (2019) In this action, the patient can be discharged on the same day with maximum care after ensuring that the patient will not experience a risk that threatens the patient's health or life when the patient is discharged.

Many factors are driving the development of ambulatory anesthesia such as the increasing cost of treatment (hospitalization) in hospitals, the number of hospital beds that are increasingly limited compared to the increasing number of population(Siena, 2019). While according to Usnadi (2018) Ambulatory anesthesia is very useful to optimize in care and medical resources that have an impact on health services in hospitals, the need for post-anesthesia patient inpatient rooms is reduced so as to reduce the waiting list of inpatients in hospitals.

METHODS

Study Design

This research design uses qualitative descriptive through a case study approach with multiple case study design. The objects in this study are called participants or informants. In this case study using non-probability sampling technique with purposive sampling.

Setting

The study was conducted at Kertha Usada General Hospital from February to April 2023.

Research Subject

Participants in this study were anesthesiologists who were still actively on duty at Kertha Usada Hospital and totaled 5 people with inclusion criteria: Minimum education Diploma III Nursing Anesthesiology, Diploma III Nursing, and Bachelor of Nursing who obtained training in Anesthesiology Nursing, Working at Kertha Usada General Hospital, Anesthesiologists who have provided care to ambulatory anesthesia patients, Anesthesiologists who are willing to be participants in the study. The exclusion criteria in this study are: Anesthesiologist undergoing training outside Bali, Anesthesiologists who were on leave, illness, or clearance at the time the study was conducted.

Instruments

The data collection method used is an interview with supporting instruments in the form of interview guides.

Data Analysis

Data analysis using case analysis is a case study by discussing one case and cross-case analysis is cross-case data analysis used to compare and combine the findings obtained from each case in a *case study.*

Ethical Consideration

This research has received ethical approval from the ethics commission of the Bali Institute of Technology and Health with number: 04.0005/KEPITEKES-BALI/I/2023.

RESULTS

In this study, there were 5 participants in this study which can be described as follows:

Participant 1: based on the results of the interview obtained that participant 1 carried out an anamnesis which included examination of patient identity, surgical indications, and anesthetic focus data but in obstructive sleep apnea was not carried out in detail. Participant 1 also performed a physical examination using 6B which included breathing, blood, brain, bladder, bowel, and bone, then a diagnostic examination analysis was carried out, but in special considerations no detailed assessment was carried out. In the assessment of the physical status of ASA patients ambulatory anesthesia is carried out on patients with ASA I physical status and not infrequently on patients with ASA II, then on the consideration of anesthesia an assessment of the length of surgery is carried out and the anesthesia requirements used must be met. Anesthesia in ambulatory patients using a type of general anesthesia with a face mask technique.

Participant 2: based on the results of interviews with 2 participants, participants conducted an anamnesis which included patient identity, surgical indications, and anesthesia focus data. In patients with mild obstructive sleep apnea can still undergo ambulatory anesthesia. Physical examination and diagnostic analysis are also performed. Similarly, participant 1 did not make special considerations in detail, but it is necessary to ensure that the patient is accompanied by an adult who can be responsible for the patient's condition when discharged. on ASA physical status considerations and anesthesia considerations are also carried out on patients who will undergo ambulatory anesthesia.

Participant 3: from the results of interviews that have been conducted on participants 3 it was found that participants perform anamnesis on patients who will undergo ambulatory anesthesia including patient identity, type of surgery this is because not all patients can undergo

ambulatory anesthesia. Next in the history is the assessment of anesthesia focal data. related to physical examination, diagnostic examination, assessment of ASA physical status with ASA I and ASA II patients, and consideration of anesthesia is also carried out to determine the patient's condition before anesthesia. Participant 3 also did not assess the special considerations in detail, but it was necessary to ensure that the patient did not drive his own vehicle (driving). Participant 4: from the results of the interviews that have been conducted, it was found that 4 participants also did the same history and in obstructive sleep apnea a study was carried out. Participant 4 also underwent a physical examination, and diagnostic examination analysis. Participant 4 also said to give special consideration to patients who will undergo ambulatory anesthesia. The physical status of ASA is the same, namely ASA I and ASA II and anesthesia considerations

Participant 5: from the interviews that have been conducted it was found that participants carried out anamnesis, physical examination, diagnostic examination analysis, assessment of ASA physical status and consideration of anesthesia. In special considerations, a detailed study is not carried out, this is because special considerations are not a benchmark in determining whether patients can undergo ambulatory anesthesia or not. Are also carried out.

DISCUSSION

From the results of interviews conducted with the five participants who served as anesthesiologists, was found that all participants conducted an assessment of the patient's identity. At the time of study asked includes the patient's name, age, date of birth, address, occupation, education and from when to enter the hospital. This is in line with Mangku.G, (2018) which states that the history includes assessing the patient's identity or patient biodata. This assessment is important to ensure that the patient will indeed undergo surgery with ambulatory anesthesia.

In surgical indications, not all surgical procedures can be performed under ambulatory anesthesia. Ambulatory anesthesia can only be performed in minor surgeries such as curettage, AFF DJ Stant, soft tissue tumors with biopsy, repositioning and other minor surgeries. This is in accordance with Rahayu That no ambulatory anesthesia cannot be applied to all types of surgery. In some patients who have a high risk, ambulatory anesthesia is not allowed so that ambulatory patients are classified as patients with minor surgery such as circumcision, AFF DJ Stant. This statement is supported by Mubarak dan Sumantri, (2019) which states that ambulatory types of surgery can be performed on cataract, biopsy, and closed repositioning patients.

Furthermore, anesthesia focus data is assessed on the history of certain drug or food allergies, history of systemic disease, history of drug use or being consumed by patients because it may interact with anesthesia drugs, psychological bad habits such as whether the patient smokes and drinks alcohol, the patient's last meal intake or patient fasting at home and no less important is the history of previous anesthesia that is a concern as a stylist to find out whether the patient has a history of post-anesthesia such as severe pain, severe PNOV, shortness of breath and other possibilities that can occur. This is in line with Mangku.G, (2018) Special anamnesis related to anesthesia focus data that needs to be done includes a history of systemic diseases that have been suffered by patients or are being suffered by patients, rewater of use of drugs that have been or are being used, bad habits of patients such as smoking,

drinking alcohol, and users of certain drugs (sedatives and narcotics), history of food and drug allergies, patient fasting and the last is a history of surgery or anesthesia that has been undertaken by the patient. This study aims to determine whether the patient has a history of post-anesthesia that is not good such as post-anesthesia complications (uncontrolled pain, and severe PNOV). But in obstructive sleep apnea all participants did not conduct detailed assessments, they only assessed the anatomy of patients such as patients with short necks, patients with obesity who tend to have a higher risk. While according to Walujo dan Satya, (2020) said that a history of obstructive sleep apnea needs to be assessed in pre-anesthesia because obstructive sleep apnea is one of the complicators of intraoperative and postoperative. Obstructive sleep apnea can stimulate the sympathetic system so that it can increase blood pressure and can interfere with the cardiovascular system. In addition, obstructive sleep apnea can also increase the potential for cerebrovascular event myotatic infarction, bleeding and can even result in death.

The physical examination carried out includes breathing, blood, brain, bladder, bowel, and finally bone. This is in accordance with the Pre, Intra, Post-anesthesia Anesthesiology Structuring Care Module (Ikatan Penata Anestesi Indonesia, 2018) said that the physical examination through the 6B assessment includes B1 (Breathing) which includes LEMON examination, breathing patterns, and the patient's breathing sound. B2 (Blood) which includes a <2-second Parisian CRT examination, heart sounds one and two and whether there are additional heart sounds. B3 (Brain) on this examination to determine the patient's consciousness. B4 (Bladder) to determine urine production and find out whether the patient's urination can be done spontaneously or requires assistive devices. B5 (Bowel) this examination aims to determine intestinal noise, intestinal peristaltic, and whether there is liver enlargement. Finally, there is B6 (Bone) which aims to find out whether there are spinal disorders, whether the patient has stiff horns, whether the patient has fractures, extremity disorders due to injuries experienced.

All participants performed diagnostic examination analysis which included laboratory and radiological examinations. This analysis is important for all patients who will undergo anesthesia, especially in ambulatory anesthesia patients. If the diagnostic examination has abnormal results and affects the patient's condition, it must be reported to dr. Sp. An for a follow-up plan and whether the patient is still allowed to undergo surgery with ambulatory anesthesia. This is in line with Mangku.G, (2018) said that laboratory and radiological examinations and other examinations are very important to be carried out on patients who will undergo ambulatory anesthesia. Laboratory tests carried out include blood tests (Hb, Ht erythrocytes, leukocytes, bleeding period, and blood clotting period) and urine tests (physical, chemical and urine sediment examinations).

In particular, not all participants conducted an assessment of the distance and access of homes to health facilities. This is because it is not a benchmark in determining whether a patient can undergo ambulatory anesthesia or not. In special consideration, the most emphasized is that there are patients who accompany when coming to the hospital or in other words there are adults who can be responsible for the patient's condition when the patient is discharged later. This is not in line with Reader, (2010) Which states the length of distance from the hospital to home is one of the considerations because it can trigger risks that affect the instability of the patient's condition. This statement is also supported by Mubarak and Sumantri, (2019) Which

says the distance between the health facility and the patient's home should not exceed 60 minutes. In addition to the distance between health facilities and home, what needs to be considered is whether there are adults who understand and understand and can be responsible for the patient's condition after discharge and ensure that the patient does not drive his own vehicle.

Of the five participants, they said that the physical status of ASA allowed was ASA I and ASA II. Patients with ambulatory anesthesia usually have ASA I physical status and patients with ASA III and above are not allowed. This is in line with Begani and Mulchandani, (2019) said that the physical status classification of the American Society of Anesthesiologists is a guide for anesthesiologists in determining risk factors that can occur. Patients who are considered capable of undergoing anesthesia ambulatory procedures are patients with medically stable ASA I and ASA II physical status. While according to Walujo and Satya, (2020) said that patients with ASA I and ASA II physical status are prime candidates for ambulatory anesthesia.

All five participants had the same answer regarding the surgical time should not exceed 60 minutes. In surgery that takes more than 60 minutes, the patient cannot undergo ambulatory anesthesia. In addition, the requirements for anesthesia must be met, namely rapid and smooth induction, analgesia and anesthesia are quite good, the recovery period is conscious quickly, and manipulation is minimal. This is because it can affect the patient's condition after anesthesia. This is in line with Mubarak which states that the duration of surgery should not exceed 60 minutes. Surgery with a period of time that is too long will cause the effect of anesthesia accumulation so that the patient's conscious recovery period is also getting longer. Related to anesthesia requirements that must be met, rapid and smooth induction so that patients do not feel pain. Induction can be given intravenously, minimal manipulation, analgesia and anesthesia are good enough to relieve and relieve pain in surgery, anesthesia is deep enough for surgery, recovery period is fast so it does not require a long time to be in the hospital.

CONCLUSION

Based on the pre-anesthesia assessment on ambulatory anesthesia patients conducted by the five participants, it was concluded that the five participants carried out the anamnesis which included assessing the patient's identity, surgical indications because not all types of surgery can be done with ambulatory anesthesia, and finally the anesthesia focus data emphasized on post-anesthesia risk events in the form of PONV. Physical examination using 6B which includes B1 breathing, B2 blood, B3 brain, B4 bladder, B5 bowel, and finally there is B6 which is bone. Analysis of diagnostic examinations which include laboratory and radiology results in the form of ultrasound. In special considerations, not all participants conducted a detailed study. Then on the assessment of the physical status of ASA, patients who are allowed to undergo ambulatory anesthesia are patients with ASA I and ASA II. And the last is the consideration of anesthesia, namely the duration of surgery should not exceed 60 minutes, with the condition that anesthesia must be met in the form of fast and smooth induction, analgesia and anesthesia are good enough, the recovery period is conscious quickly, and manipulation is minimal.

SUGGESTIONS

With this research, Anesthesiologists can increase their knowledge regarding the importance of conducting a correct and precise pre-anesthesia assessment for patients undergoing outpatient anesthesia procedures, thereby minimizing or avoiding risks that may occur after surgery or anesthesia.

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DECLARATION OF CONFLICTING INTEREST

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