

The Phenomenon of Post Digestive Surgery Patient's Pain in West Java Indonesia

Fikri Mourly Wahyudi*¹, Alya Zahra Aprina², Hilmy Manuapo³

¹Lecturer & Nurse Anesthetist. Bhakti Kencana University. Health Science Faculty. Bandung

²Nurse Anesthetist Student. Bhakti Kencana University. Health Science Faculty. Bandung

³Anesthesiologist. Bandung Kiwari Hospital.

ABSTRACT

Introduction: The high prevalence of pain in post-digestive surgery patients shows urgency in handling pain management. The role of a nurse anesthetist is needed to conduct pain assessment and pain management to solve the problem.

Objective: This study aimed to analyze the phenomenon of pain in post-digestive surgery patients in the inpatient room of Hospital X in West Java, Indonesia.

Methods: This research used a quantitative observational approach with 30 post-digestive surgery patients. Sampling used an accidental sampling technique, with an observation sheet using Visual Analogue Scale indicators, then analyzed descriptively.

Results and Discussion: Results showed that most of the respondents complained of severe pain after being given the analgesic of Tramadol 100 mg and ketorolac 60 mg drip.

Conclusion: This study concludes that the level of pain in post-digestive surgery patients at X Hospital 4 hours after post-surgery is on the severe pain scale. So, it is recommended that pain assessment be further improved and further research on postoperative pain management.

KEYWORDS: Digestive surgery, post-operative pain, nurse anesthetist, pain assessment, tramadol, ketorolac

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I. INTRODUCTION

Specific major surgical procedures for digestive tract organs are called digestive surgery. Digestive tract disorder is one of the most treated diseases with surgery, responsible for 12% of surgical that needed hospitalizations in 2015 (Tuech et al., 2020).

Many post-operative complications can occur in patients, such as respiratory, cardiovascular, thrombosis, wound, and pain, (Willingham et al., 2020). The problems that can occur post-digestive surgery specifically include incision management, which is related to the healing of wounds and prevention of infection, pain, limitation of activity, dietary and nutrition fulfillment, and other complications that can occur from the treatment of problems mentioned before. These problems and their treatment won't stop until the patients get discharged, but they will also prolonged until they are home, which means home care, such as telehealth, might be a necessity, (Raximboy et al., 2023).

WHO stated that pain is one of the most presenting symptoms following surgery. Pain needs to be managed as soon as it emerges, and there shall be no delay, (Kajiwara, 2020). (Park et al., 2023) with a meta-analysis, research shows that patients who are discharged after surgery face moderate to severe pain ranging from 31% to 58% in 2 weeks after they are discharged. The postoperative pain can linger longer even after the patient is discharged from the hospital if they were reporting another complication in the PACU before (Willingham et al., 2020).

(Wiguna et al., 2020), stated a similar point of view that shows the prevalence of post-low abdominal surgery patients at Sanglah General Hospital Indonesia experiencing mild pain on day 1 was 71%, moderate pain was 23%, and severe pain was 1%. Meanwhile, on the 2nd day after surgery, 21% of patients felt no pain, 70% had mild pain, and 8% had moderate pain. Other studies also state that severe pain is caused by surgery in the intra-abdominal region.

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The post-operative pain problem that is still happening raises a new question: whether adequate pain assessment, prevention, treatment, and continuation of care even after patients are already at home is sufficient, (Wiguna et al., 2020). Up until today, there is no comprehensive guideline issued yet regarding the management of pain, even though there are many recommendations implemented, such as neurostimulation, pharmacotherapy, interventional, etc. (Moisset et al., 2020).

In Indonesia, most of the post-digestive surgery analgetic prepared consist of a combination of Tramadol and Ketorolac, which is really effective for patients who undergo appendectomy (Pathi et al., 2020). However, a finding in Hospital X in West Java, Indonesia, shows that it might not be enough, as many patients still complained of pain after the regimen. As a government hospital, Hospital X provides subspecialist care that takes care of up to about 53 digestive surgery patients in a month.

The role of a good anesthesia care team is needed to prevent and fix the pain problem. In Indonesia, an anesthesia care team consists of anesthesiologists and nurse anesthetists, also called "Penata Anestesi," as stated in the National regulation. Later in the Decree of the Minister of Health Number HK.01.07/MENKES/722/2020, it is stated that nurse anesthetists can carry out pain management according to the instructions of an anesthesiologist. Then it is very vital for a nurse anesthetist to ensure measurable, standardized, and quality anesthesia care services in the PACU and, if possible, after the patients get discharged (Wahyudi et al., 2023).

As the research on the effectiveness of the regimen of tramadol and ketorolac in treating post-digestive surgery hasn't been done in Indonesia, and seeing that the problem of pain is still surfacing, it is really important to find out the post-digestive surgery patients' pain in the Surgical Ward of Hospital X of West Java Indonesia.

II. METHODS

This research uses a descriptive quantitative research design with an observational approach. The sample for this research was 30 respondents who underwent digestive surgery and were getting the regimen of tramadol and ketorolac post-operative as analgetic at Hospital X of West Java, Indonesia. Respondents were chosen with an accidental sampling technique with the exclusion of patients who were admitted to the ICU after the surgery. The research was carried out from February to March 2023.

The instrument used in this research is observation sheet with the Visual Analog Scale (VAS). The data collected was then analyzed descriptively to find out the effectiveness of tramadol and ketorolac in solving the problem of pain in post digestive surgery patients.

III. RESULTS AND DISCUSSION

Results and analysis of research regarding the description of pain levels in post-digestive surgery patients at

X Hospital, West Java, in 2023. The research results obtained are described as follows:

Table 1. Respondent's Characteristics

Sex	n	%
Sex:		
Male	10	33,3
Female	20	66,7
Age:		
18-59	24	80
>60	6	20
Surgery:		
Cholecystectomy	8	26,7
Laparoscopy	4	13,3
Laparotomy biopsy	1	3,3
Appendectomy	6	20
Hemorrhoidectomy	2	6,6
Hernia surgery	4	13,3
Rectal biopsy	1	3,3
Hartman procedure	1	3,3
Anastomosis	1	3,3
Resection	2	6,6
Fistulectomy		
Pain level (VAS):		
Mild (Scale 1-3)	3	10
Moderate (Scale 4-6)	11	36,7
Severe (Scale 7-10)	16	53,3
Physiological response:		
Non	5	16,7
Increased heart rate	17	56,7
Pale face	8	26,6
Behavioral response:		
No expression	13	43,3
change	17	56,7
Grimaced		
Post-operative analgetics:		
Tramadol 100 mg + Ketorolac 60 mg in 500 ml RL (drip)	30	100

Source: The authors (2023)

Most respondents are female (66,7%), and in productive ages. After the respondents underwent digestive surgery such as hernia, appendectomy, etc, they were given an analgetic drip, which consisted of 100 mg of tramadol and 60 mg of ketorolac, which was soluted in 500 ml of Ringer Lactate (RL). Respondents are observed in the PACU for about 15 to 30 minutes, depending on their Aldrete score and condition, and then discharged to be taken care of later at the surgical nursing ward.

After four hours in the ward, the respondents' pain was assessed using the VAS chart. The respondents were asked to point out the scale they feel, representing their pain.

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Other responses, such as heart rate and facial expression, were assessed too, to reinforce the accuracy of the scale stated by the respondents.

Surprisingly, all the respondents reported feeling pain in the surgical wound, even though the duration of tramadol and ketorolac drip was most likely still in effect. Mild pain was reported by 10% of the respondents, while moderate and severe pain were reported by 56,7% and 26,6%, respectively. Moreover, the respondents also show grimace expressions, with an increase in heart rate.

Clinically, on average, tramadol would last about 4 hours and 57 minutes, while ketorolac would last about 5 hours and 14 minutes. Both tramadol and ketorolac are known for their safety and efficacy in treating moderate and severe pain (Tuladhar et al., 2021). However, findings at the hospital show the opposite, because the combination of the two is still complained of being less able to withstand pain.

In most hospitals in Indonesia, the lack of nurse anesthetists in the health service often makes it hard to implement continuous, safe anesthesia care (Wahyudi et al., 2023). Most of the time, patients are only observed under 30 minutes in the Post Anesthesia Care Unit (PACU). Then the handover to the ward nurse takes over, as the nurse anesthetist needs to return to the operating room to attend another surgery with the anesthesiologist. It makes almost none of the post-operative patients who are discharged to the nursing ward be reassessed by the nurse anesthetist for another potential complication, including pain.

Theoretically, it is important to do a reassessment and ensure a timely response when it comes to pain. Patients must be able to self-report the uneasy feeling they have regarding the surgical wound. Even though VAS is a valid scaling to use, its unidimensional side makes it hard to fully explain how patients really feel (Small & Laycock, 2020). Thus, some symptoms were also assessed in this research, such as the heart rate increasing, grimace expression, and pale face, to make it even easier to evaluate the pain experienced by the patients.

In the era of "Enhanced Post-Operative Recovery Programmes" (ERAS), which try to improve the quality of surgery and anesthesia care to reduce hospitalizations and medical complications, the provision of pain relief needs to be optimized. While clear guidance is still not set yet, a multimodal approach with the usage of opioids and other techniques is still recommended. However, the most important point of view in taking care of post-operative pain is not procedure-specific but more patient-specific, as pain is a subjective matter that may vary from one patient to another (Kehlet, 2020).

Based on the finding of this research that all the patients are treated with the same regimen of tramadol and ketorolac, we need to remember the concept of the "analgesic ladder," which was released by WHO in 1986. In the first step for mild pain, it is best to use Nonsteroidal anti-inflammatory drugs (NSAIDs) or acetaminophen. For the second step,

when the pain is rather moderate, it is recommended to use weak opioids such as tramadol with the deliberation of adjuvant or nonopioid analgetics. When the pain is severe enough, the usage of potent opioids like morphine or fentanyl might be necessary (Anekar et al., 2024). So using the regimen for all different kind of pain might be not optimal.

CONCLUSIONS

All the respondents receive the analgesics of tramadol 100 mg and ketorolac 60 mg drip in Ringer Lactate. The intensity of pain felt by respondents 4 hours after digestive surgery during observation in the inpatient room showed that the majority of respondents complained of pain on a severe scale (7-10) (53.3%). The physiological response most respondents showed was an increase in heart rate (56.7%), and the behavioral response showed a grimace in pain (56.7%).

A more personalized patient-specific approach to multimodal pain management might be needed to treat post-digestive surgery pain. But before the treatment, a holistic pain assessment must also be implemented. While nurse anesthetists in Indonesia are still limited to the operating room because of the lack of quantity, a regulation regarding the procurement of nurse anesthetists needs to be implemented. Adequate competent healthcare workers, combined with good pain assessment and patient-specific pain management, will ensure post-digestive surgery pain will be resolved.

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