MANAGEMENT OF PAIN TREATMENT FOR POST-ABDOMEN SURGERY PATIENTS AT ISLAMIC HOSPITAL CEMPAKA PUTIH, JAKARTA

[1]Diana. L. R and [2]Leni. F
[1, 2] Faculty of Pharmacy, University of 17 August 1945, Jakarta.
Corresponding author: dianalailaramatillah@gmail.com

ABSTRACT: *This study aims to explore the pain management in patients with abdominal postoperative surgery. A cross – sectional, descriptive research approach is applied to the patients with a postoperative period from January to March 2015, excluding any chance of intervention against research subjects, in Jakarta Islamic hospital. Every person experiencences pain during their lives. The degree of pain and response to pain differs from person to person. Pain is a sensory and emotional unpleasant experience,which is associated with the tissue damage actual or potential. The experience of pain is often felt by postoperative patients. So, pain management is required after abdominal surgery in patients. Abdominal surgical operations are often associated with postoperative pain, requiring pain relief medications. Management of postoperative pain in patients include pharmacological and non-pharmacological therapies. In the context of Pharmacological therapy, the provision of non-opioid analgesics, adjuvant, and opiates drugs are considered. In Polypharmacy, drugs interactions between the drug and the disease, age-related metabolic changes, and frequent side effects of drugs needed to be taken into consideration in the use of these drugs in these patients. The sample size of the reseach included 199 patients, 50 patients were found to met the inclusion criteria.The biggest number of patients were found to have Hepatitis C infection, and were mainly hypertensive. Mostly male patients within the age range of 51-60 years old found to have hepatitis C. Patients who underwent dialysis between 81-120 times during the study period showed to have highest mortality rate (16.6%) with Sepsis contributed about 18.6% of the mortality cases. The type of hemodialysis machines and cause of death (0.000 $p < 0.05$) were found to be significant beside other factors that contributed significantly such as hepatitis drugs (Hepa-Merz, HP-Pro and Hepa-Merz+ HP-Pro) and SGPT (0.027, $p< 0.05$), triglyceride (0.047 , $p< 0.05$), APTT patients (0.034, $P< 0.05$), Bleeding time (0.011, $p< 0.05$), Clotting time (0.000, $p< 0.05$). All post-surgery patients needed pain killers either for medium or severe pain. Some patients faced the side effects of painkillers but they recovered afterwards from the side effects of painkillers (analgesics). Pain management can improve the prognosis quality of life.*

Keywords: *Pain Killers, Post- Surgery pain, Treatment of Side Effects*

INTRODUCTION

Each person may experience pain during their lives. Pain intensity and pain responses differ from one person to another [5]. Pain is a sensory and emotional experience unpleasant, which is associated with tissue damage actual or potential [7]. The painful experience, often perceived in patients postoperatively.

Abdominal surgeries are quite common. According to Guirre [5] , that tends painful abdominal surgery among all types of surgery and 70% of patients who undergo abdominal surgery suffer from moderate to severe pain.

Pain is a mixture of physical reactions, emotions, and behavior. Pain-producing stimuli send impulses through peripheral nerve fibers. Pain fibers enter the spinal cord to undergo one of the several routes nerves. There is pain messages to interact with nerve cells inhibitor, prevents the stimulation of pain, so it does not reach the brain or transmitted without hindrance to the cerebral cortex. Once a painful stimulus reaches the cerebral cortex, the brain will interpret the quality of pain and processing information on past experiences and knowledge and culture in perceiving pain[6]. Some studies have shown that although the pain has been well managed approximately 70% of patients who experience moderate pain continues to have a severe pain after two days postoperatively [10,12] .Some of the factors that affect postoperative abdominal pain such as age, gender, type of surgery, pain intensity, anxiety, fatigue and family and social support [6].

Analgesics are drugs that reduce or eliminate pain without losing consciousness. Analgesia is needed to cope postoperative pain. Analgesics are used are divided into two groups, namely non-opioid and opioid analgesics[9]. Although highly effective as a postoperative analgesia, opioids have dangerous side effects, especially respiratory depression and addiction.

Side effects were more common in post-operative patients are constipation, respiratory depression, hypersensitivity reactions, impaired liver and kidney function, as well as disorders of gastric acid. Health complications are common. This, causing various disturbances in patients postoperatively. Such disorders include nausea, vomiting, constipation, acute and vulnerable bleeding infection reaction. When this disorder is not addressed soon, there will be further disruption, and will ultimately lead to decreased quality of life of patients postoperatively.

Jakarta Islamic Hospital is a class B private hospital, the hospital is able to provide specialist medical care and subspecialist limited. The hospital can accommodate referrals from other hospitals in the district. Based on the description above, the researchers are interested in studying the side effects of analgesics and pain management of side effects and postoperative analgesia in patients in the Jakarta Islamic Hospital.

METHODOLOG

The research was conducted using cross-sectional study design and methods of a Prospective descriptive study with cross-sectional study approach for all patients who received postoperative analgesics. This study aimed to describe the factors that affect the intensity of postoperative abdominal

pain which is then monitored to obtain the desired data. The study was conducted starting in January to March 2015. The study was conducted at the Medical Record and in the post-operative ward unit of Islamic Hospital Cempaka Putih Jakarta.

Inclusion: All patients who have undergone surgery in the abdominal area and treated in Jakarta Islamic Hospital and get analgesics during the study.

Exclusion: All patients who received analgesics but did not do surgery in the abdominal area.

:

All complaints and lab results before and after surgery are recorded, including pain intensity, gender, analgesic use, levels of hemoglobin, pain scale before and after the use of analgesics. Data were analyzed using SPSS-17 and then presented in narrative form, tabulation, and images.

RESULTS AND DISCUSSION

During the period from January to March 2015 there were 50 cases of post-operative patients using analgesics. The data obtained were analyzed by univariate and bivariate as follows

Table1.Distribution Characteristics Provided Analgesics In Patients Post-Abdomen Surgery

Analgesics used	**Description**	
	Total	**Presentation** (%)
Ket+ Cod	2	4
Ket+ as. Mef	9	18
PCT+ Ket	4	8
PCT+ Ket+ as. Mef	4	8
Ket	2	4
As. Mef	1	2
PCT+ Cod	1	2
PCT+as. Mef+ Ketp	2	4
Ket + Tra	1	2
Diaz	1	2
As. Mef+ Ketp	5	10
Ketp+ Tra	1	2
PCT+ as. Mef+ Ketp	8	16
Ket+ Ketp	3	6
Ketp	4	8
Ket + as. Mef+ Ketp	2	4
Total	50	100

Note:

Ket:ketorolac, As.Mef: mefenamic acid, PCT: Paracetamol, Cod: Codeine, Tra: Tramadol, Ketp: Ketoprofen, Diaz: Diazepam

From **Table 1**, it can be seen that the nine patients with post-operative abdominal get analgesia of mefenamic acid. The use mefenamic acid anti-pain medications quite limited. This is due to mefenamic acid have side effects as diarrhea,bloody diarrhea, and symptoms of irritation of the gastric mucosa, thus mefenamic acid combined with another analgesic to get side effects to a minimum.

Eight other patients with post-operative abdominal get analgesia mefenamic acid+Paracetamol+ketroprofen. NSAIDs are an analgesic non-steroidal anti-inflammatory which indicates potential analgesic effect, but the effect was anti-inflammatory can be administered intramuscularly or intravenously. This medicine is very useful for preventing post-surgical pain, either as a single drug supplied with opioids.

Many patients get analgesic paracetamol with NSAIDs. This,due to the combination of paracetamol with NSAIDs provide a better analgesic effect. Paracetamol combination with NSAIDs is more effective than Paracetamol alone (in 85% of studies) and also more effective in the appeal with a NSAIDs alone (in 64% of study). Other patients get a single analgesics and analgesic combinations. It is tailored to the patient's condition after abdominal surgery and consideration of more severe side effects.

Analgesic pain relieving drugs are substances that reduce pain without losing consciousness. On the basis of pharmacological, analgesics are divided into two major groups, namely analgesia peripheral(non-narcotic) which consists of drugs which are not narcotic and non-centrally.

The next analgesia is a narcotic analgesic used to relieve severe pain, such as cancer.

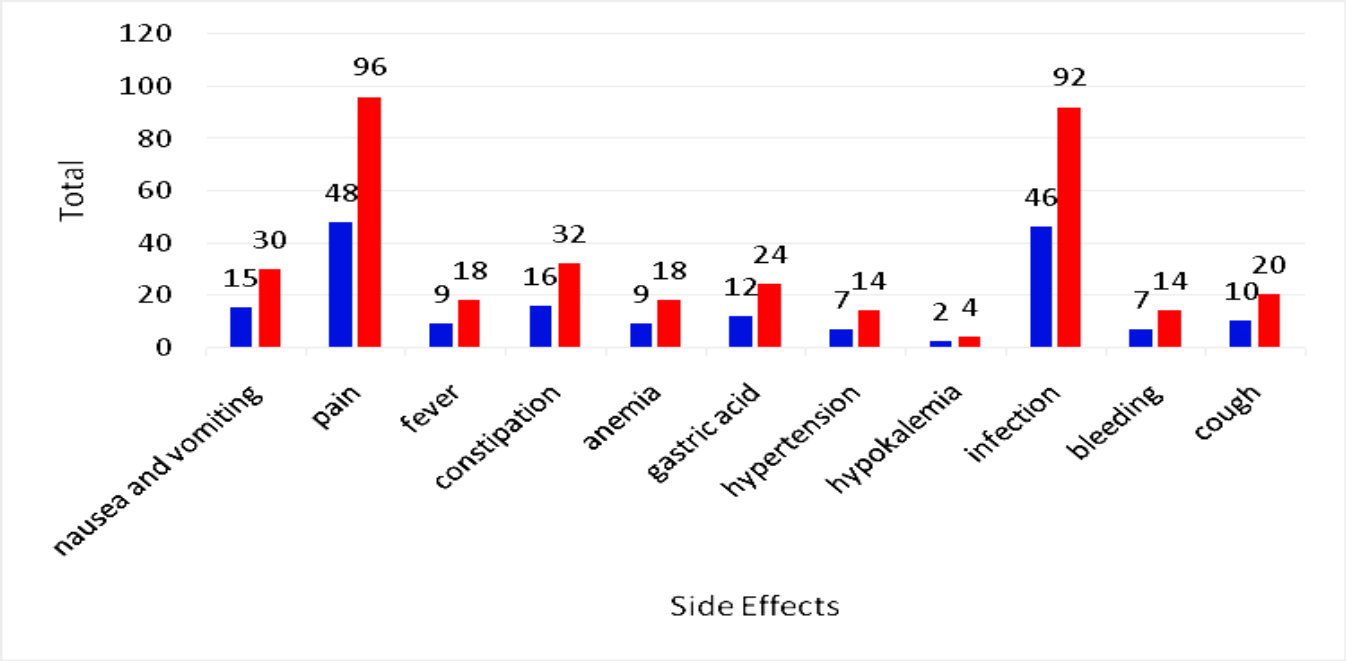

Figure.1 Side effects that occur in post-surgery patients

From **Figure 1**, it can be seen that the clinical picture of the patient's overall post-operative pain most patients (96%), vulnerable to infection (92%), and experiencing constipation (32%). Other complaints were nausea and vomiting (30%), gastritis (24%), cough (20%), anemia(18%), fever (18%), hypertension(14%), vulnerable to bleeding (14%) and hypokalemia(4%).

Table 2 Relationship between Type Operations with Pain Intensity

Types of Surgery	Pain intensity			Total	P Value*
	mild	moderate	severe		
Apedisitis	1	8	4	13	0.00
Caesare	0	1	36	37	
Total	1	9	40	50	

**Chi – square Test*

Table 3 The relationship between analgesics was used with Type Operation

Analgesic	Appendicitis	Caesar	P Value*
1. Ket+ Cod	2		0.00
2. Ket+ as. Mef	4	5	
3. PCT+ Ket	2	2	
4. PCT + Ket + as. Mef	3	1	
5. Ket	1	1	
6. as. Mef	1		
7. PCT+ Cod			
8. PCT+ as. Mef+ Tra			
9. Ket+ as. Mef + Ketp		2	
10. Ket+Tra		2	
11. Diaz		1	
12. as. Mef+ Ketp		5	
13. Ketp+Tra			
14. PCT+ as. Mef+ Ketp		8	
16. Ketp			

**Chi – square Test*

Table.4 Relationship between analgesics were used and Side Effects

Analgesic	The Side Effect	P Value*
Ketorolac + Codein	Nause and Vomiting	0,000
Ketorolac + mefenamic acid	Fever	
Paracetamol + Ketorolac	Painful	
Paracetamol + Ketorolac + Mef. Acid	Constipation	
Ketorolac	Gastric Acid	
Mefenamic acid + Paracetamol + Codein	Anemia	
Paracetamol + Mef acid + Tramadol	Hypertension	
Ketorolac + as. Mefenamat+ Ketroprofen Hypokalemia	Vulnerable Infection	
Ketorolac + Tramadol	Vulnerable Bleeding	
Diazepam	Cough	
Mefenamic acid + Ketoprofen		
Ketroprofen + Tramadol		
Parasetamol + mef. Acid + Ketroprofen		
Ketroprofen+ Ketorolac		
Ketroprofen		

**Chi – square Test*

Table. 5 Relationship between the side effects of analgesia and treatment of analgesia side effects

Side effects	Treatment Side Effects	P Value*
Nause and Vomiting	Dexamethason/ Ondancetron	
Painful	Acetaminofen/ Codein/Tramadol/Mef. acid/ Diazepam/Ketorolac	
Fever	Paracetamol	0.003
Constipation	Lactulac/ Dulcolac/ Mikrolac/Fosen	
Gastric Acid	Ranitidin/Remopain/Omeprazol	
Cough	Clanexy/Stabixin/Amoxan/Sylex	
Anemia	Vit B Comp/ Alin. F/Fenitrin/SF/Gliosodin	
Infection	Antibiotikseperti Ceftriaxone/Cefadroxil/ Ciprofloxacin/Gentamicin/Cefixime/ Clindamicin	
Bleeding	Transamin/Syntocinon	
Hypertension	Amlodipin/Bisoprolol/Losartan/Dopamet	

**Chi – Square Test*

Table.6 Relationship Between Scale Used Pain with Analgesics

Analgesic	Pain Scale	P Value*
Ketorolac + Codein		
Ketorolac + Mefenamic acid		
Paracetamol + Ketorolac		
Paracetamol + Ketorolac + Mef. Acid	Small	
Ketorolac	Medium	0.009
Mefenamic Acid	Greatt	
Paracetamol + Codein		
Paracetamol + Mef. Acid + Tramadol		
Ketorolac + Mef. Acid + Ketroprofen		
Ketorolac + Tramadol		
Diazepam		
Mef. Acid + Ketropofen		
Ketroprofen + Tramadol		
Paracetamol + Mef. Acid + Ketroprofen		
Ketroprofen+ Ketorolac		
Ketroprofen		

**ANOVA Test*

Table 7 Relationship between Pain Scale Before and After Provided with Analgesics

Pain Scale	Mean	Standar Deviation	P Value*
Before the pain scale was given pain killers and after given analgesics	3,54	1,40	0,000

***Paired Samples T – Test*

Based on the results in **table 2**, the statistical tests it can be concluded that there is a relationship between the type of surgery with postoperative abdominal pain intensity($p < 0.05$). This type of surgery is a surgical classification of medical procedures based on time, the tools, the type of anesthesia and the risk experienced, includes the operations of small, medium, large, and special[3]. This type of surgery is performed also affect the intensity of pain, for example,in the results of previous studies in which for mild to moderate pain scale can be seen in respondents with this type of surgery APP(appendicitis) with mild to moderate pain scale(26%). The types of operations are classified as type minor surgery because of the nature of the pain is acute pain that eventually disappears with or without treatment after the state restored the damaged areas, whereas for moderate to a severe pain scale was found in the type of operation caesar(74%).

Information: PCT: Paracetamol, As.Mef: Acid Mefenamat, Ket: ketorolac, Ketp: Ketoprofen, Tra: Tramadol, Cod: Codein, Diaz: Diazepam

Based on the results in **table 3** the statistical tests it can be concluded that there is a significant relationship between the type of operation with analgesics($p < 0.05$). This type of surgery is one of the factors affecting the level of postoperative pain, because of the type of operation will determine the extent of surgical manipulation and tissue damage will occur. So that the appropriate use of analgesics should be considered to improve the comfort of patients to pain that should be felt by the patient.

Based on the results in **table 4** the statistical tests can be concluded that the analgesic is given nothing to do with side effects ($P < 0.05$). Non-Opioid analgesics such asNSAIDs has been popular as analgesia. These drugs are useful in reducing opioid analgesic requirement. In addition, NSAIDs facilitate the healing process by reducing the side effects of opioids. NSAIDs on the other hand also because unwanted effects include gastrointestinal mucosal disorders and blood flow to the kidneys.

Based on statistical test in **table 5**, the results can be concluded that the side effects associated with the drugs given ($p<0.05$).

Therefore, patients should receive treatment of side effects of analgesics. It is intended to treat, minimize or prevent side effects of the analgesics that will worsen the patient's condition.

Based on the statistical test in **table 6** it can be concluded that there is a correlation between the scale of pain with analgesic was given. Analgesia as pharmacologically controls for moderate and severe pain. However,non-pharmacological management aims to enhance the patient's ability to control the pain [13,14]. So it takes a combination of pharmacological and non-pharmacological pain for pain control so that the sensation of pain can be reduced and the recovery period is noted longated[1].

Several studies have shown that although the pain has been managed well, approximately 70% of patients who experience acute pain ongoing into severe acute pain after two days postoperatively [10,12]. In addition,the survey showed that pain become to moderate pain after abdominal surgery, although the enhanced analgesia [15]. and it can cause side effects that can have an impact on the physiology and psychology of the patient'sorgansystems[2].

Based on the results of statistical tests in **table 7** it can be concluded that there is a significant relationship between pain scale data before the pain scale after given analgesics ($p =0.000$).

This is because patients who had surgery and has not received an analgesic will feel great pain because of the cuts on parts of his body anesthesia and surgery cause disorders that can cause various complaints and symptoms.Complaints and symptoms that are often raised Spain, fever, tachycardia, shortness of breath, nausea, vomiting, andgeneraldeterioration[4,8].

According to Benedetti [11], severe pain stimulates stress reaction that adversely affects the heart and immune system [11]. When the pain impulses are transmitted, increased muscle tension, as well as on local vasoconstriction. In the operation wound, analgesics should be given to the plan in accordance with the location and nature of the wound. The dose given should depend on the reaction of patients[8].

Surgical pain relief in the abdominal area may not occur for several weeks, depending on the location and nature of the surgery. Appropriate use of analgesics will reduce the intensity of pain in patients after abdominal surgery.

CONCLUSION

Management of pain and side effects of analgesia in patients after abdominal surgery in Jakarta Islamic Hospital period January March 2015 has been good. All post-surgery patients need pain killer either for medium to severe pain. Some patients have faced the side effects of painkiller but patients will be fine after giving the treatment of painkiller (analgesic) side effects. Pain management can improve the prognosis quality of life.

SUGGESTION

Similar studies are needed to optimize the management of side effects in patients after surgery for pain arising. Similar research is also needed to be done on the patients of different types of surgery similar patients with other diseases that also gave rise to the sensation of pain. With the existence of the

study, it can automatically add references about proper management of pain management

Conflict of Interest

There is no conflict of interest regarding of this publication.

1. REFERENCES

2. Bobak, Lowdermilk, Jensen. Buku Ajar KeperawatanMaternitas/Maternity Nursing. Translator :Maria A. Wijayanti, Peter I Anugerah. 2004. Edisi 4. Jakarta : EGC.
3. Black, J.M. & Hawks, J.H. Medical-Surgical Nursing Clinical *Management for Positive Outcomes.* (8^{th}ed.). St. Louis : Elsevier (2009).
4. Ministry Of Health Indonesia (Depkes). *Profil Kesehatan Indonesia*.(1997).
5. Lin, L. Y., & Wang, R.H. Abdominal surgery, pain and anxiety: preoperative nursing intervention. *Journal of Advanced Nursing*. 51(3), 252 – 260 (2005).
6. Mc Guire, L. Pain: the fifth vital sign, Medical-surgical nursing: Critical thinking for collaborative care. (63-90). *St. Louis, Missouri: Elsevier Saunder*. (2006).
7. Potter, P A & Perry, A G. Buku Ajar Fundamental Keperawatan :*Konsep, Proses, danPraktik Edisi 4 Volume 2.. Jakarta* : EGC (2006).
8. Price, S.A., & Wilson, L.M. Patofisiologi Konsep Klinis Proses-Proses Penyakit. Volume 2. Translator: pendit, B.U. Jakarta: EGC (2006).

9. Sjamsuhidajat, R., Wim de Jong. Buku Ajar *Ilmu Bedah.* (2002).
10. Tjay,Tan Hoan & K. Rahardja. Obat-obat Penting. 2007. PT Gramedia: Jakarta.
11. Owen, McMilla, and Rogowski. *Modern Surgical Care Third Edition* Vol 1. (1995).
12. Benedetti. Systemic Analgesics, The Management of Pain vol 2, 1990. P640-1675. Lea and Febiger : Philadelphia.
13. Xavier Capdevila, Christophe Dadure, et al. Effect of Patient-controlled Perineural Analgesia on Rehabilitation and Pain after Ambulatory Orthopedic Surgery. *Anesthesiology* ; 105:566–73 (2006).
14. Van Kooten, M. Non Pharmacological Pain Management For Postoperative Coronary Artery Bypass Graft Surgery Patients. *Journal of Nursing Schoolarship*: Vol 31, Issue 2, Page 157 (1999):
15. Moulin, Clark, Gilron, et.al. Pharmacological Management of Chronic Neuropathic Pain- Consensus Statement and Guidelines from the *Canadian Pain Society. NCBI Pubmed. Spring* : : 12(1) : 13-21 (2007).
16. Mukherji & Rudra. Postoperative Pain Relief for Ambulatory Surgery. *Indian J. Anaesth*; : 50 (5) : 355-362 (2006).