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IMPLEMENTATION OF PERIOPERATIVE PAIN MANAGEMENT FOR MR. A WITH APPENDICITIS AT UPT RSUD LABUANG BAJI MAKASSAR

IMPLEMENTASI MANAJEMEN NYERI PERIOPERATIF PADA TN. A DENGAN APENDISITIS DI UPT RSUD LABUANG BAJI MAKASSAR

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Abstract

Appendicitis is an acute inflammatory condition of the appendix that requires prompt surgical intervention and comprehensive perioperative nursing care to prevent complications. This study aims to describe the application of perioperative pain management in a patient with appendicitis at UPT RSUD Labuang Baji Makassar. A descriptive case study design is employed using a perioperative nursing care approach covering preoperative, intraoperative, and postoperative phases. The subject is a 44-year-old male patient diagnosed with appendicitis who undergoes appendectomy. Data are collected through interviews, observation, physical examination, and documentation, with pain assessed using the Numeric Rating Scale. Nursing interventions focus on non-pharmacological pain management, including deep breathing relaxation in the preoperative phase and Benson relaxation therapy in the postoperative phase. The results show a decrease in pain intensity and anxiety before surgery, effective control of intraoperative bleeding, and gradual reduction of postoperative pain accompanied by improved tissue integrity and patient knowledge. This case study demonstrates that appropriate non-pharmacological nursing interventions effectively support perioperative pain management and enhance patient recovery in appendicitis cases.

Keywords : appendicitis, perioperative nursing care, pain management, relaxation therapy, case study.

Abstrak

Apendisitis adalah kondisi peradangan akut pada usus buntu yang membutuhkan interven bedah segera dan perawatan keperawatan perioperatif komprehensif untuk mencegah komplikasi. Studi ini bertujuan untuk mendeskripsikan penerapan manajemen nyeri perioperatif pada pasien apendisitis di UPT RSUD Labuang Baji Makassar. Desain studi kasus deskriptif digunakan dengan pendekatan perawatan keperawatan perioperatif yang mencakup fase praoperatif, intraoperatif, dan pascaoperatif. Subjek penelitian adalah pasien laki-laki berusia 44 tahun yang didiagnosis menderita apendisitis dan menjalani apendektomi. Data dikumpulkan melalui wawancara, observasi, pemeriksaan fisik, dan dokumentasi, dengan nyeri dinilai menggunakan Skala Peringkat Numerik. Intervensi keperawatan berfokus pada manajemen nyeri non-farmakologis, termasuk relaksasi pernapasan dalam pada fase

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praoperatif dan terapi relaksasi Benson pada fase pascaoperatif. Hasil penelitian menunjukkan penurunan intensitas nyeri dan kecemasan sebelum operasi, pengendalian perdarahan intraoperatif yang efektif, dan penurunan nyeri pascaoperatif secara bertahap disertai dengan peningkatan integritas jaringan dan pengetahuan pasien. Studi kasus ini menunjukkan bahwa intervensi keperawatan non-farmakologis yang tepat secara efektif mendukung manajemen nyeri perioperatif dan meningkatkan pemulihan pasien pada kasus apendisitis.

Kata Kunci : apendisitis, perawatan keperawatan perioperatif, manajemen nyeri, terapi relaksasi, studi kasus.

1. INTRODUCTION

Appendicitis is an acute inflammatory condition of the appendix that requires rapid medical and surgical intervention to prevent life-threatening complications. The appendix is a small, sac-shaped organ, approximately 5–10 cm in length, attached to the cecum and playing a role in the digestive system. Inflammation of this organ can develop rapidly and, if not adequately treated, has the potential to cause necrosis, perforation, or peritonitis [1]. Appendicitis is one of the leading causes of acute abdominal pain, specifically in the right lower quadrant of the abdomen [2].

Pathophysiologically, appendicitis is generally caused by an obstruction of the appendiceal lumen, resulting in increased intraluminal pressure, decreased blood flow, and bacterial proliferation. This obstruction is most commonly caused by fecaliths, though it can also be triggered by lymphoid tissue hyperplasia, tumors, foreign bodies, or parasitic infestations [3]. Additionally, lifestyle factors such as a low-fiber diet contribute to constipation, which increases intracecal pressure and elevates the risk of appendiceal obstruction [4].

Based on reports from the World Health Organization (WHO), appendicitis remains a global health issue with a mortality rate of approximately 21,000 deaths, with a higher prevalence in males compared to females [5]. In the United States, there are an estimated 300,000 cases of appendicitis annually, with an increasing incidence in children and adolescents [5]. In Indonesia, the Ministry of Health of the Republic of Indonesia reported 28,040 hospitalized cases of appendicitis [6]. Local data at UPT RSUD Labuang Baji Makassar shows that during the period from January to September 2023, 78 patients were treated with a diagnosis of appendicitis.

Clinical manifestations of appendicitis include abdominal pain, nausea, vomiting, and fever, with pain being the primary complaint. Initial pain is usually visceral and felt around the umbilicus, then shifts to localized somatic pain in the right lower quadrant of the abdomen as the parietal peritoneum becomes involved [3]. this pain tends to worsen when the patient moves, coughs, or performs certain activities, thereby disrupting comfort, mobility, and the patient's healing process.

The primary management for appendicitis is surgical intervention, either through laparotomy or laparoscopy, as part of medical therapy to eliminate the source of infection [7]. However, surgical procedures often cause significant pain during both the preoperative and

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postoperative phases. Therefore, perioperative pain management is a vital aspect of nursing care to enhance patient comfort, accelerate recovery, and prevent postoperative complications.

Perioperative pain management in appendicitis patients involves both pharmacological and non-pharmacological approaches. Non-pharmacological interventions frequently applied in nursing practice include deep breathing relaxation techniques, Benson therapy, music therapy, acupressure, aromatherapy, warm or cold compresses, and spiritual interventions such as listening to Al-Qur'an recitations [8]. Several studies indicate that deep breathing relaxation techniques are effective in reducing pain intensity in appendicitis patients, particularly in the preoperative phase [9]. Additionally, Benson therapy has been proven to provide positive effects in reducing postoperative pain in various surgical cases [10].

Based on the description above, the author is interested in developing a scientific paper in the form of a case study titled "Implementation of Perioperative Pain Management for Mr. A with Appendicitis at UPT RSUD Labuang Baji Makassar." This study is expected to provide a comprehensive overview of the application of nursing care, particularly in perioperative pain management for appendicitis patients, and serve as a reference for nursing practitioners in improving the quality of evidence-based nursing services.

2. RESEARCH METHOD

This research uses a descriptive case study design with a perioperative nursing care approach that includes the preoperative, intraoperative, and postoperative phases. This approach aims to describe the implementation of perioperative pain management in appendicitis patients undergoing surgical procedures in accordance with evidence-based nursing practices [3], [7].

The research subject is a male patient with the initials Mr. A with a medical diagnosis of appendicitis who underwent surgery at UPT RSUD Labuang Baji Makassar. Subject selection was conducted purposively with the consideration that the patient experienced abdominal pain typical of appendicitis and required perioperative pain management. The research was conducted on October 16, 2024, starting from the preoperative phase through the postoperative phase in the recovery room.

Data collection was carried out through interviews, observation, physical examination, and documentation studies. Pain assessment utilized the Numeric Rating Scale (NRS), while the patient's physiological response was assessed through the monitoring of vital signs. The nursing process was conducted systematically following the stages of assessment, diagnosis, planning, implementation, and evaluation [8], [9].

Nursing diagnoses were established according to the patient's clinical condition in each perioperative phase, including acute pain, anxiety, risk of bleeding, and impaired tissue integrity. Nursing interventions focused on non-pharmacological pain management, namely deep breathing relaxation techniques in the preoperative phase and Benson relaxation therapy in the postoperative phase, which are proven effective in reducing pain intensity in surgical

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patients [8]–[10]. In the intraoperative phase, nursing care was focused on the prevention of complications, specifically the risk of bleeding.

Data were analyzed using descriptive qualitative analysis by comparing the patient's condition before and after nursing interventions in each perioperative phase. The entire research series was conducted with attention to the principles of nursing ethics, including patient consent and confidentiality of identity.

3. RESULT AND DISCUSSION

a. Case

Mr. A, a 44-year-old married male working as an entrepreneur and residing at Jalan Tembusan KS Tubun No. 5, was treated at UPT RSUD Labuang Baji Makassar with a chief complaint of acute pain. The patient reported persistent pain localized in the lower right abdomen, which had been felt for approximately three months prior to hospital admission. The pain was described as a stabbing sensation with fluctuating intensity that increased during physical activity, with a pain level of 4 based on the Numeric Rating Scale (NRS).

Prior to the surgical procedure, the patient underwent preoperative preparation consisting of fasting for eight hours. The nurse assisted in the preparation process by changing the patient’s clothes, applying a surgical cap and mask, and preparing the patient for transfer to the operating room. During the preoperative assessment on October 16, 2024, the patient complained of stabbing pain in the lower right abdomen with an intensity of 4 NRS. The pain was intermittent and worsened with movement. The patient also appeared anxious as this was his first surgical experience. Vital signs showed a blood pressure of 120/70 mmHg, a pulse rate of 80 beats/minute, and a respiratory rate of 22 breaths/minute. The nursing problems identified in this phase were acute pain due to physiological injury and anxiety due to limited exposure to information.

In the intraoperative phase, the patient was brought to the operating room, where an intravenous line was initiated using a 16-gauge catheter and oxygen was administered at 3 liters/minute via nasal cannula. Vital signs showed a blood pressure of 110/85 mmHg, a pulse rate of 88 beats/minute, a respiratory rate of 22 breaths/minute, a temperature of 36°C, and an oxygen saturation of 98%. The patient underwent an appendectomy procedure under general anesthesia through an incision of approximately ±10 cm in the lower right abdomen. During the surgery, an electrocautery device was used to control bleeding. The nursing problem identified in this phase was the risk of bleeding.

After the surgery, the patient was transferred to the Recovery Room. The patient complained of a cold sensation and pain in the surgical wound area with an intensity of 5 NRS, described as sharp stabbing pain appearing sporadically. Examination showed a blood pressure of 130/85 mmHg, a pulse rate of 90 beats/minute, a respiratory rate of 22 breaths/minute, a body temperature of 36.5°C, and an oxygen saturation of 99%. The surgical wound appeared to have impaired tissue integrity due to the surgical intervention. Nursing problems in the

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postoperative phase included impaired tissue integrity and acute pain due to physical trauma (surgical intervention).

b. Results

Nursing interventions in the preoperative phase, in the form of deep breathing relaxation therapy, showed positive results. Following the intervention, the patient reported a decrease in pain intensity from a scale of 4 to a scale of 2 NRS. Furthermore, the patient's anxiety level decreased, as demonstrated by reduced restless behavior, increased eye contact, and stable vital signs. Evaluation showed a blood pressure of 110/80 mmHg, a pulse rate of 80 beats/minute, and a respiratory rate of 20 breaths/minute. The nursing problems of acute pain and anxiety in the preoperative phase were declared resolved, and the intervention was discontinued.

During the intraoperative phase, the patient did not experience bleeding. The use of an electrocautery device proved effective in controlling bleeding during the surgical procedure, thereby minimizing the risk of bleeding complications.

In the postoperative phase, nursing interventions in the form of tissue integrity care and education regarding wound care, hydration, and nutritional intake showed good results. The patient and family understood the instructions provided regarding wound care and the prevention of complications. Evaluation showed stable vital signs with a blood pressure of 130/85 mmHg, a pulse rate of 86 beats/minute, a respiratory rate of 22 breaths/minute, a temperature of 35.5°C, and an oxygen saturation of 99%. The problem of impaired tissue integrity was declared resolved.

Postoperative pain was managed through the application of Benson relaxation therapy. The evaluation results showed a gradual decrease in pain intensity from a scale of 5 to a scale of 2 NRS. The reduction in pain was accompanied by a decrease in grimacing expressions, a more regular breathing pattern, and the stabilization of blood pressure and pulse rate. At the final evaluation, blood pressure was recorded at 115/80 mmHg, the pulse rate was 80 beats/minute, and the respiratory rate was 20 breaths/minute. The problem of acute pain was declared resolved, and the intervention was discontinued.

c. Discussion

Perioperative nursing management for patients with acute pain due to appendicitis shows results consistent with previous theories and research findings. In the preoperative phase, the patient experienced acute pain related to a physiological injuring agent in the form of an inflammatory process. This condition is commonly found in appendicitis patients, where the inflammatory process causes the release of chemical mediators such as prostaglandins, histamine, and bradykinin that stimulate pain receptors and cause pain sensations due to the stretching of abdominal tissue [11], [12]. In this case, the patient reported stabbing pain in the lower right abdomen with moderate intensity (NRS 4), accompanied by non-verbal responses such as grimacing and restlessness, which confirm the acute pain response as described in the literature.

Nursing interventions in the form of deep breathing relaxation techniques proved effective in reducing pain intensity during the preoperative phase. After the intervention was

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carried out, the patient's pain intensity decreased from a scale of 4 to 2. This result supports the findings of Patasik et al., which state that deep breathing relaxation is capable of creating a calming effect through increased oxygenation and activation of the parasympathetic nervous system [13]. Furthermore, this technique helps increase the patient's concentration on the breathing rhythm, thereby triggering the release of endorphins that act as natural analgesics and inhibit the transmission of pain impulses to the cerebral cortex [14]. The reduction in pain occurring in the patient is also consistent with the research results of Sudirman et al., which prove the effectiveness of slow deep breathing in reducing pain in appendicitis patients [15].

In addition to pain, the patient in the preoperative phase also experienced anxiety related to a lack of information regarding the surgical procedure. Preoperative anxiety is a psychological response frequently experienced by patients undergoing surgery, especially in individuals with their first surgical experience [16]. In this case, the patient appeared tense, restless, and expressed concerns regarding the surgery to be undergone. Nursing interventions in the form of deep breathing relaxation combined with the provision of factual information were proven to reduce the patient's anxiety level. This is in line with the research of Ningrum et al., which states that deep breathing relaxation can reduce anxiety through increased oxygen supply and stabilization of the body's physiological responses [17]. Other studies also show that the combination of relaxation techniques and education is effective in reducing preoperative anxiety [18].

In the intraoperative phase, the patient did not experience bleeding during the surgical procedure. The use of an electrosurgical unit (electrocautery) played an important role in controlling bleeding by effectively coagulating tissue. This device works using high-frequency electric currents that allow simultaneous tissue cutting and coagulation, thereby increasing the safety and efficiency of the surgical action [19]. This finding is consistent with previous research stating that cauterization provides better results in bleeding control and supports the wound healing process compared to conventional methods [20].

In the postoperative phase, the patient experienced impaired tissue integrity related to extreme environmental temperatures and the presence of a surgical incision wound. Impaired tissue integrity is a nursing problem that frequently emerges after surgery due to tissue damage and changes in local perfusion [21]. The nursing intervention provided focused on wound care education, nutritional fulfillment, and adequate hydration. This approach is supported by the theory stating that nutritional status plays a vital role in the wound healing process, where adequate nutritional intake can accelerate tissue regeneration and reduce the risk of postoperative complications [21], [22].

Furthermore, the patient also experienced acute postoperative pain related to a physical injuring agent in the form of a surgical incision. Postoperative pain is a physiological response that almost always occurs due to tissue damage during surgical procedures [23]. In this case, the initial pain was assessed at a scale of 5 and described as a stabbing pain in the surgical wound area. The nursing intervention applied was Benson relaxation therapy. This technique combines breathing relaxation with spiritual aspects or individual beliefs, thereby creating a

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deeper relaxation response [24]. After the implementation of Benson relaxation therapy, the patient showed a gradual decrease in pain intensity until reaching a scale of 2, accompanied by improvements in vital signs. This finding is consistent with the research results of Soumokil et al., which state that Benson relaxation is effective in reducing postoperative pain and increasing patient comfort [25].

Overall, the results of this case study show that non-pharmacological nursing interventions provided appropriately at each perioperative phase are capable of reducing pain, reducing anxiety, and supporting the patient's recovery process. These findings emphasize the importance of the nurse's role in providing comprehensive evidence-based nursing care to perioperative patients.

4. CONCLUSION

Based on the evaluation results conducted on October 16, 2024, Mr. A experienced several nursing problems during the perioperative phase. In the preoperative phase, the patient complained of right lower abdominal pain with a stabbing character and a pain intensity reaching a scale of 5, accompanied by anxiety regarding the surgical procedure to be undergone as his first surgical experience. This condition indicates the physiological and psychological responses commonly occurring in appendicitis patients before undergoing surgery.

The nursing diagnoses established in the preoperative phase included acute pain related to a physiological injuring agent (inflammation) and anxiety related to limited exposure to information. In the postoperative phase, the nursing diagnoses developed into impaired tissue integrity due to surgical action, acute pain related to a physical injuring agent, and knowledge deficit related to surgical wound care.

Nursing interventions in the preoperative phase focused on pain management and anxiety reduction through the application of deep breathing relaxation techniques. In the postoperative phase, nursing care was directed toward maintaining skin and tissue integrity through adequate wound care, pain reduction using Benson relaxation techniques, and increasing the knowledge of the patient and family through health education.

The evaluation results showed that acute pain and anxiety in the preoperative phase decreased after the deep breathing relaxation intervention was performed. In the postoperative phase, impaired tissue integrity was successfully managed, as demonstrated by the understanding of the patient and family regarding surgical wound care. Postoperative pain intensity showed improvement after the implementation of the Benson relaxation technique, while the knowledge deficit was successfully resolved through health education on the importance of maintaining cleanliness and surgical wound care.

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