

Nursing Care of Acute Pain in Rectal Cancer Patients Using Non-Pharmacological Approach with Benson Therapy: A Case Study

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ARTICLE INFO

Article History:

Submitted: 10-02-2023

Reviewed: 14-02-2023

Revised: 19-02-2023

Accepted: 19-02-2023

Keywords:

Benson therapy,
acute pain,
post-operative,
rectal cancer

ABSTRACT

Pain is the main problem experienced by many postoperative patients. One of the therapies for patients with rectal cancer is surgery, so patients with rectal cancer also feel pain after getting surgery. > 80% of patients experience postoperative pain, but appropriate pain management only occurs in approximately 30-50%. Benson's relaxation therapy reduces pain intensity in postoperative patients without causing side effects. This study aims to analyze benson therapy to reduce pain in postoperative surgery for patients with rectum cancer. The method used in this research is a descriptive case study. The research was conducted for three days on one patient with postoperative surgery in the Seruni Room at RSD dr Soebandi Jember. Benson therapy is carried out twice a day for 10-15 minutes. This study found that Benson therapy can reduce the level of acute pain in postoperative patients from the NRS scale 6 to the NRS scale 3, respiration rate 20 x/minute, SpO₂ 98%, blood pressure 120/80mmHg, pulse 87x/minute. The result of reducing the pain scale indicates that Benson therapy can be applied to treat acute pain in postoperative patients to make certain patients' conditions feel better.

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1. INTRODUCTION

Pain in postoperative patients is the main problem that is widely felt and becomes a problem that disturbs the patient's comfort. Post-operative pain felt by the patient can interfere with activity,

appetite and can increase the risk of chronic pain if it is not treated correctly. According to Magidy, et al 2016 states that post-operative pain is a painful experience that is felt after surgery, and is a complaint often found in almost all post-operative

patients. Rectal cancer is the 3rd most common cancer, there are 1.2 million cases per year, and most patients with rectal cancer undergo surgery. In general, post-rectal cancer patients have a range of NRS pain scores > 4 , but this is also influenced by age and gender, everyone's pain threshold is different even with the same surgical procedure (Lindberg et al., 2020).

According to the American Cancer Society, colorectal cancer (CRC) is the third most common cancer and the third most common cause of cancer death in men and women in the United States. Based on the 2012 GLOBOCAN survey, the incidence of CRC worldwide ranks third (1360 out of 100,000 population [9.7%], all male and female) and ranks fourth as a cause of death (694 out of 100,000 population [8.5%], all male and female). In the United States alone in 2016, it is predicted that there will be 95,270 new cases of CRC and 49,190 deaths due to CRC. The increase in cases of rectal cavities in Indonesia is caused by changes in diet in Indonesians, this is due to the habits of Indonesians who are starting to lead to the habit of consuming western food (Westernization) which is higher in fat and lower in fiber (Ministry of Health, 2018). Most patients who have had surgery experience moderate pain (60%) (Rohmayani & Suwito, 2017), but proper

pain treatment only occurs in approximately 30-50%. Apart from pharmacology, pain can also be reduced using the Benson relaxation technique (Kaparang et al., 2022).

Pain that occurs in post-operative rectal cancer patients can occur due to incisions made so that will cause an increase in pain receptors and the release of 3 pain hormones, namely prostaglandins, bradykinin and histamine which will then be received by nerve impulses to be translated in the brain into an unresponsive response.

Management of rectal cancer depends on factors such as cancer stage, histopathology, possible side effects, patient condition and preference. However, the main modality that is most recommended for early-stage cancer is surgery, this is done for curative purposes. In end-stage cancer, the first option that can be done is chemotherapy for palliative purposes. In addition, radiotherapy can also be used to treat rectal cancer (Ministry of Health, 2018). When patients with rectal cancer receive surgery and after surgery the patient feels pain that can interfere with his comfort, this can be overcome by using Benson relaxation therapy. Benson relaxation therapy has been proven to be effective in reducing pain intensity in postoperative patients, where the average

NRS pain scale that is felt by post-operative patients > 4, it can change up to an NRS pain score of 2 (Ramadhan et al., 2022). Benson relaxation therapy is recommended because it is easy to do independently and does not cause side effects.

2. METHODS

The research was conducted from 27 June – 29 June 2022. The activities were located in the inpatient room of a hospital in the Jember area, East Java. This study aims to analyze benson therapy to reduce pain in postoperative surgery for patients with rectal cancer. This study used primary data from observations when researchers were on a shift. Besides that, it also uses secondary data in hospital documents, such as patient medical records. In addition, this study also uses research

articles. This research method uses case studies to analyze the implementation of Benson therapy for reducing acute pain in post-operative patients.

3. RESULTS

Based on the first day of observations, the first day on 27 June 2022, when the patient was in pre-operative condition, the patient had a chronic pain odor of her cancer and when given benson relaxation therapy, the chronic pain felt by the patient did not change much. On June 28 - June 29 2022 the patient underwent uretero sigmoidectomy surgery and the patient experienced acute postoperative pain, after being given benson relaxation therapy there was a significant change from a pain scale of 6 to a pain scale of 3 on the third day.

Table 1. The outcome of the Developmental Problem of Acute Pain

| Characteristics | Day 1 (27 June 2022) | Day 2 (28 June 2022) | Day 3 (29 June 2022) |
|------------------|----------------------|----------------------|--------------------------|
| Pain Complaints | 2 (enough increase) | 3 (medium) | 4 (moderately decreased) |
| grimace | 2 (enough increase) | 2 (enough increase) | 4 (moderately decreased) |
| Trouble sleeping | 2 (quite decreased) | 3 (medium) | 4 (moderately decreased) |

The nursing problems on the first day before surgery patients, namely chronic pain associated with tumor infiltration (cancer) in the rectum characterized by patients localizing pain and looking grimacing in pain, sleep pattern disturbances associated with pain characterized by dark and lethargic eyes

areas, Nutrition deficits associated with decreased appetite marked by a decrease in body weight. Whereas on the second day a nursing problem emerged. A stoma hole in the abdomen characterized by acute pain associated with post-Uretero Sigmoidectomy abdominal incision. An impaired sense of comfort related to post-

operative wounds (making of stomas) is characterized by a stoma hole in the abdomen.

The patient received a Urtero Sigmoidectomy procedure on June 28 2022 with the type of anesthesia used, namely General Anesthesia (GA).

4. DISCUSSION

Several characteristics or factors cause increased pain intensity and rectal cancer, such as age, gender, Past medical history, Hereditary, Diet Pattern, Activity Pattern, and Lifestyle.

a. Age

Based on the results of the 59-year-old client assessment, at this age according to WHO, he is in the middle age group (middle age adult). According to the Ministry of Health (2018) states that those aged > 50 years have a moderate risk of developing colorectal cancer (Ministry of Health, 2018). As you age or in menopausal women, hormone production will decrease, increasing the risk of colorectal cancer (CS Wong et al., 2019). At the age of the patient under management entered in mid-adulthood. Analgesively, people with old age may experience several physiological changes that affect the experience of acute pain (Faroakh Hosseini, et al, 2022). A cognitive function that is excessive or decreased in response to acute pain

experienced by adults, makes the analgesic dose must be low with adequate consideration of pain management (start low and titrate carefully) (Faroakh Hosseini, et al., 2022). Based on research from Faroakh Hosseini, et al (2022) it was stated that 50% of inpatients with old age experience significant acute pain.

b. Gender

The sex of the clients studied is female, this is in line with the research of Dwijyanthi, et al (2020) which explains that colorectal cancer occurs mostly in the female sex (Dwijyanthi et al., 2020). The Ministry of Health (2018) states that women who use postmenopausal hormone therapy have a lower risk of developing colorectal cancer than those who do not. However, this hormone is also not recommended for preventing colorectal cancer because it can increase the risk of breast cancer and cardiovascular disease. (Ministry of Health, 2018). Patient management is female, according to research conducted by Wiguna (2020) women are considered to have a lower pain tolerance than men, so they are very prone to experiencing more severe pain (Wiguna et al., 2020). Even though women are considered to be more sensitive to pain than men, there are complex problems that need to be faced in carrying out this identification, such as: psychological,

biological, and cultural factors (Templeton, Kimberly J., 2020). Sex-based differences between men and women in lie pain in the causes and perceptions of nociceptive stimuli (Templeton, Kimberly J., 2020). Compared to men, women have a higher potential for experiencing pain and tend to report more severe pain at different locations (Templeton, Kimberly J., 2020).

c. Medical history

In the assessment data, it was found that the client had felt a lump and anus bleeding two years ago, but the client had not examined it, in March 2022 the pain he felt was getting worse so the client had him checked at the hospital. This lump can be thought of as a type of polyp, polyps in the large intestine, especially the adenomatous type, which has the most potential to become malignant and cause colorectal cancer. An estimated 95% of colorectal cancers develop from adenomatous polyps. Increasing age is a prognostic factor that can exacerbate polyp development. However, in people >50 years of age with one or more adenomatous polyps, it is very important to identify them and remove them before they become malignant (Sawicki et al., 2021).

History of pain can be a factor in increasing the intensity of pain, the client says he has felt pain for about two years, so after the operation the client is getting used

to the pain; it is just that it still disturbs the client's comfort. Each individual learns to manage his pain from previous pain experiences, but this does not guarantee that the individual will be better at managing pain in the future. If someone has a history of pain in the past that does not go away, the individual can also feel anxiety or even fear of feeling the pain again (Potter & Perry, 2006).

d. Hereditary

The client says that no one in his family has ever had cancer. Due to inherited genetic tendencies, family history is a risk factor for a person experiencing colorectal cancer. It is estimated that 2-8% of colorectal cases result from an inherited genetic syndrome. The two most common hereditary syndromes predisposing to the development of colorectal cancer are hereditary nonpolyposis colorectal cancer (HNPCC), also known as Lynch syndrome, and familial adenomatous polyposis coli (FAP). HNPCC is an autosomal dominant disease caused by mutations in a gene known as mismatch repair error. The protein encoded by this gene is responsible for reaper errors in DNA that occur during cell division (Sawicki et al., 2021).

Individual differences in DNA sequence (genetic) and genomic structure (epigenetic) are estimated to account for up to 70% of individual differences in pain

sensitivity and susceptibility to painful conditions in addition to influencing treatment (e.g. genetic pharmacotherapy) (Chadwick et al., 2021). Heritability is a measure of the proportion of disease etiology or occurrence attributed to the total amount of genetic variation. Pain susceptibility is a unique multifactorial disorder resulting from complex interactions between the genome and various environmental factors; studies have also shown that chronic pain conditions such as irritable bowel syndrome (25%), back and neck pain (35%), and widespread chronic pain and Migraine (50%) is largely determined by genetic factors (Bilal et al., 2022).

e. Diet Patterns

The client said he likes eating sweet potatoes more often than rice and vegetables. Diet patterns can also trigger cancer, one of which is eating meat. According to the International Agency for Research on Cancer Group consumption of red meat and processed meat is classified as potentially carcinogenic to humans. This red meat can come from the muscles of livestock such as beef, lamb, game and pork. Meanwhile, processed meat has been preserved, salted or smoked. The likelihood of developing colorectal cancer increases by about 17% for every 100 gram serving of red meat and about 18% for every 50 grams

of processed meat eaten daily. The risk of developing colorectal cancer can be reduced by consuming foods high in fiber because fiber is considered to facilitate the disposal of feces so that feces will not be stored for long in the large intestine; fiber can also increase the amount of water in the feces so that this can help dilute carcinogens and procarcinogens in feces. Fiber can also stimulate the growth of microbes in the intestine which are beneficial for suppressing tumor growth. According to the World Cancer Research Fund/American Institute for Cancer Research, a diet low in calcium, vitamin D and dairy products can also reduce the risk of developing colorectal cancer (Sawicki et al., 2021). Fiber can also stimulate the growth of microbes in the intestine which are beneficial for suppressing tumor growth. According to the World Cancer Research Fund/American Institute for Cancer Research, a diet low in calcium, vitamin D and dairy products can also reduce the risk of developing colorectal cancer (Sawicki et al., 2021). Fiber can also stimulate the growth of microbes in the intestine which are beneficial for suppressing tumor growth. According to the World Cancer Research Fund/American Institute for Cancer Research, a diet low in calcium, vitamin D and dairy products can also reduce the risk

of developing colorectal cancer (Sawicki et al., 2021).

The human body uses six nutrients from food: carbohydrates, fats, proteins, fiber, minerals and vitamins. Dietary patterns on pain also appear to have an effect. Consumption of processed meats, sweet foods, processed grains and low intake of fruits and vegetables causes excessive production of pro-inflammatory mediators to make them more sensitive. Peripheral afferent neurons include interleukins, histamine, TNF- α , 5-hydroxytryptamine, bradykinin, free radicals and eicosanoids (prostaglandins, leukotrienes and thromboxane). An imbalanced diet can also produce several anti-inflammatory mediators, including antioxidants and antioxidant defenses. A decrease in pain intensity can be obtained by reducing the intake of pro-inflammatory foods and increasing the intake of unsaturated fats, fruits and vegetables (Dragan et al.,

f. Activity Patter and Lifestyle

Every day the client is only at home as a housewife, doing housework, and the client rarely does physical activity. According to Sawicki (2021) it is estimated that people who are not active in carrying out regular physical activities have a 50% higher risk compared to people who are active and regularly doing physical activity;

this is because physical exercise has been shown to improve immune system function, reduce inflammation, reduce stress, optimize metabolic function, help to regulate hormone levels so that this can help protect against cancer development (Sawicki et al., 2021).

Excessive physical activity or exercise can induce motion-related pain, especially musculoskeletal pain. However, a review conducted by Cochrane concluded that exercise therapy, such as yoga, pilates or motor control, has a good effect on pain and can improve quality of life. The use of this exercise therapy must be adapted to the mechanism of pain: it is more comprehensive for nociplastic pain (Trouvin et al., 2022)

Implementation Benson therapy

The Benson Relaxation therapy mechanism consists of several actions that can help reduce pain; the first is by using the client's beliefs or beliefs (focusing on words that have a positive meaning for the client, you can also mention God's name), positive words that are believed by the client if mentioned continuously will cause a strong relaxation response compared to other relaxation techniques without using a belief system (Atmojo et al, 2019). The following Benson Therapy action is to take a deep breath, take a deep breath that is

long and precise can provide sufficient energy, because if someone takes a deep breath there will be an exchange of O₂ and CO₂ gases, so that when sufficient oxygen reserves are obtained it can help the body in cleaning the blood and prevent tissue damage due to the body's lack of oxygen (hypo. Therefore if there is an adequate supply of oxygen in the brain will help the body relax (Atmojo et al, 2019). When the body relaxes because the need for oxygen in the brain is adequate, this relaxed feeling will be transmitted to the brain, especially in the hypothalamus to produce Corticotropin Relaxing Hormone (CRH). When CRF works, it will stimulate the pituitary gland under the brain to increase the production of Proopiomelanocortin (POMC) and then there will be an increase in the production of the enkephalin by the adrenal medulla, besides that the pituitary gland also produces β endorphins as painkillers which are automatically naturally produced by the body, acts as a neurotransmitter (Rahayu & Yunarsih, 2016). For the last Benson Therapy action, namely by relaxing or relaxing the body's muscles

5. CONCLUSION

The managed patient with Rectal Cancer found that there are trigger factors such as age, gender, previous medical

history, activity patterns and diet or lifestyle that can trigger the occurrence of rectal ca. the results of the physical examination obtained that the client grimaced and complained of pain after surgery with a scale of 6, the results of the examination of vital signs RR 24kpm, SpO₂ 98%, no tightness. TD 130/80mmHg, N:88kpm. After undergoing post-rectal cancer surgery, the main nursing problem for patients is acute pain due to incisions and making a Uretero Sigmoidectomy in the stomach. Nursing intervention for acute pain is pain management by making observations such as identifying the location, characteristics, duration, frequency, quality, intensity of pain, identifying pain scales, identifying non-verbal responses, providing non-pharmacological techniques to reduce pain. One of the non-pharmacological interventions is Benson relaxation therapy. The main implementation is to provide non-pharmacological therapy to reduce the pain felt by clients after post-surgery by using Benson's relaxation therapy, where therapy is given 2x/day for two days besides that in giving Benson's relaxation therapy also given pharmacological therapy in the form of santagesic 3 x 1 as a way to maximize performance and effectiveness in reducing the pain felt by patients. The results of the nursing

evaluation after pain management using Benson relaxation therapy found that the patient's pain level was reduced from the NRS 6 scale to the NRS 3 scale.

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