D'Nursing and Health Journal **(DNHJ)**
E-ISSN: 2774-3810, P-ISSN: 2774-3802
Vol: 6 No: 2, September 2025
Page: 106-115

Pain Management Based on Nursing Interventions for Hematuria and Suspect Cancer Prostat in The Dr. Soebandi Jember Hospital

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Abstract
Background: Hematuria can cause significant acute pain and increase the risk of infection. Proper management is essential to alleviate pain and prevent further complications. This study aims to evaluate the effectiveness of pain management using deep breathing techniques and distraction for patients with hematuria.
Methode: The research was conducted in the Mawar Room from September 23 to 25, 2024, using a case study approach with a client suffering from hematuria and experiencing acute pain. Data were collected through interviews, observations, and physical assessments. After the intervention, the pain level of Mr. S decreased from a scale of 5 to 2, with improvements in both physical and emotional expressions. Although the pain remained intermittent, signs of grimacing and restlessness significantly decreased.
Results: Deep breathing and distraction techniques were effective in relieving the acute pain caused by hematuria. The reduction in pain levels indicates that these interventions can enhance patient comfort.
Conclusion: Pain management through deep breathing and distraction has proven effective in reducing pain in hematuria patients and can be a valuable approach in nursing practice for managing pain and reducing the risk of infection.

Keywords: *Hematuria; Suspect Cancer; Pain Management; Nursing Intervention*
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Introduction

Prostate cancer is the most common malignancy diagnosis in men globally and ranks as the fifth leading cause of death in men. In 2020 there were 1,414,249 new cases and 375,000 deaths worldwide. Data on the epidemiology of prostate cancer in Indonesia is still very limited (Mattiuzi & Lippi, 2019). The increase in the elderly population and the distribution of PSA screening in Indonesia has tripled the incidence of prostate cancer in recent years (Perdana et al, 2017). According to Globocan data in 2020, prostate cancer ranks as the 5th most common cancer case in male patients with

an incidence rate of 11.6 cases per 100,000 men and a mortality rate of 4.5 per 100,000 men in Indonesia (Sung et al, 2021).

Prostate cancer invades the urethra or bladder directly and causes hematuria. Endovascular management is considered for symptom palliation. Palliative radiotherapy, as a minimally invasive procedure, is also used to relieve bleeding from prostate cancer8 requiring frequent blood transfusions and sometimes endangering the patient's life (Ogita et al, 2021). Advanced cancer patients experience a variety of symptoms. About 6-10% of advanced cancer patients experience clinically significant bleeding. Macroscopic hematuria due to cancer is difficult to control and interferes with the patient's quality of life.

Hematuria, or the presence of blood in the urine, is one of the clinical signs that can result from various pathological conditions, such as urinary tract infections, kidney stones or trauma to the genitourinary system. This condition is often accompanied by acute pain. Acute pain arising from hematuria is usually sharp and sudden, with varying intensity, depending on the severity and underlying cause. It can have a significant impact on the patient's comfort, function of daily activities, and psychological state (Noviani, 2019).

Based on health data reports, the prevalence of suspected Ca Postat with hematuria and complaints of acute pain is high. The chronological course of the disease shows that hematuria is often preceded by infection or trauma that triggers irritation of the urinary tract wall. Subsequently, this damage leads to the appearance of blood in the urine and radiating pain, especially in the lumbar or lower abdominal area. If left untreated, the pain can increase over a short period of time, causing muscle contractions that worsen the patient's discomfort, and affect daily activities, such as urination that becomes more painful and sometimes incomplete. This condition, if prolonged, can also lead to emotional instability and sleep disturbances in patients (Taruk, 2024).

One solution that can be applied to manage acute pain in patients with hematuria is non-pharmacological pain management techniques, such as deep breathing exercises and distraction. Deep breathing can help decrease sympathetic response, thus providing a relaxing effect and reducing pain perception. Meanwhile, distraction methods, such as listening to music or focusing on a particular activity, can distract patients from their pain sensations. This approach is not only clinically effective, but also easy to

implement, without causing side effects, and supports holistic treatment for patients. With the right intervention, it is hoped that the intensity of acute pain can be reduced, so that patients can return to their activities more comfortably.

Methode

This research used a case study method conducted at Dr. Soebandi Jember Hospital on September 23-25, 2024. Data were collected through interviews, observations, physical examinations, and documentation studies. The research subject was a patient with a medical diagnosis of hematuria and suspected prostate cancer who experienced acute pain nursing problems. Interventions provided in the form of pain management through the implementation of deep breathing techniques and distraction techniques.

Results

Identitas	
Name	Mr. S
Age	55 Years
Medical Diagnosis	Hematuria + Suspect CA Prostat
Keluhan utama	Abdominal pain
History of current illness	the client said he peed blood since 10 days ago, the blood was fresh red and came out during or throughout urination but you did not check with health services. the next day the client peed again accompanied by fresh blood and there were blood clots, but only a little pee came out and since then the client could not urinate. then the client was taken to the Ajung Regional Hospital and treated there for 3 days but because it did not get better the client was referred to the Regional Hospital Dr. Soebandi Jember on Saturday, September 21, 2024. at the time of the assessment Payan embraced the pain in the lower abdomen, the pain was continuous, the head was painful 5, the client also complained of not being able to defecate since 1 week ago. what to say eat but still can not defecate. There are results of Vital Signs Blood Pressure: 103/76 mmHg, Pulse: 79 x/m, Temperature: 36.5°C, Respiration

	Rate: 20x/min, Spo2: 98%.
Past medical history	The client said that in the last 6 months he had not experienced significant pain, had peed blood since 10 days ago.
Family history of disease	The client said that the client's father had peed blood and there were no hereditary diseases such as hypertension or diabetes.
Nursing Diagnosis	1. Acute pain (D.0077) associated with urethral stricture of the prostate. 2. Urine retention (D.0050) associated with an enlarged prostate. 3. Constipation (D.0119) associated with impaired defecation reflex.
Intervention	1. Pain management (I.08238) 2. Urine Catheter Care (I.09164)
Implementation	1. Identify the location, characteristics, duration, frequency, quality and intensity of pain. 2. Provide techniques and pharmacology to reduce pain. 3. Describe pain relief strategies
Evaluation	Problem partially resolved (August 25, 2024) Intervention discontinued.

Discussion

Hematuria is the condition of red-colored urine caused by the presence of blood. Hematuria is defined as the abnormal presence of blood in the urine. Hematuria is one of the most commonly diagnosed urological disorders, accounting for more than 20% of all urological evaluations (Barocas et al, 2020). Hematuria is an important sign of a disease that requires further evaluation. In this case, the hematuria that occurred in Mr. S was due to suspected Prostate Cancer. Which is one of the most common causes of hematuria, accompanied by vesical irritability. Another clinical manifestation that can co-occur with hematuria is pain.

Pain is an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage (IASP, 2020). Reviewing the importance of the role of nurses in carrying out pain management, nurses' knowledge related to pain management is an important foundation for providing optimal pain management care (Amalia, Somantri & Agustina, 2024). Acute pain is a nursing diagnosis defined as a sensory or emotional experience related to actual or

functional tissue damage, with sudden or slow onset and mild to severe intensity lasting less than 3 months. The nursing process began on September 23, 2024, with steps based on the stages of the nursing process, namely; assessment, diagnosing, planning, implementation and evaluation.

Assessment: An assessment was conducted on September 23 on Mr. S who had hematuria with a chief complaint of lower abdominal pain. Mr. S who had hematuria with the main complaint of pain in the lower abdomen. From the subjective data, P: pain due to peeing blood, Q: pain like stabbing, R: pain in the lower abdomen, S: pain scale 5, T: pain feels continuous. From the results of the objective examination, the client's general condition appears weak with compos mentis consciousness, GCS value 15 (4-5-6), and vital signs within normal limits (Blood Pressure 103/76 mmHg, Pulse 79 x/min, Temperature 36.5°C, Respiration Rate 20 x/min, SpO_2 98%). The client showed emotional reactions to the pain felt, such as a consistent grimacing expression. The client's pain also affected his ability to move comfortably and rest well. Based on the assessment, the client's pain was triggered by hematuria, which caused irritation of the urinary tract and muscle contractions in the abdominal area. This condition can worsen discomfort and interfere with daily activities if not treated immediately. From the subjective and objective data, it was found that Mr. S was experiencing acute pain that required intervention to reduce pain intensity, provide comfort, and prevent further complications.

Pain impulses can be regulated or inhibited by defense mechanisms along the central nervous system. Pain impulses are conducted when a defense is opened and impulses are inhibited when a defense is closed. Efforts to close these defenses are the basis of the theory of pain relief (Atifah, 2020). In general, in the human body there are two kinds of pain impulse transmitters that function to deliver pain sensations, namely small diameter receptors (A delta fibers and C fibers) which function to transmit pain that is hard in nature and these receptors are usually free nerve endings located on the entire surface of the skin and in deeper body structures such as tendons, fascia and bones and internal organs, while large diameter transmitters (A-beta fibers) have receptors located on the surface structures of the body and their function is to transmit pain (Hidayat & Uliyah, 2014).

The nursing problem that arose in Mr. S was acute pain characterized by persistent pain with a scale intensity of 5. This pain was caused by hematuria, which triggered irritation and contraction of the urinary tract, thus increasing client discomfort. Acute pain is a priority as it can affect the client's daily activities, rest and psychological state. This problem requires immediate treatment to reduce pain intensity and prevent further complications. Appropriate interventions, such as deep breathing and distraction techniques, can help reduce the client's pain perception. The main goal of this treatment is to reduce pain and increase client comfort. With optimal intervention, it is hoped that the client can return to their activities more comfortably.

Deep breath relaxation is a conscious action to regulate deep breathing performed by the cerebral cortex, while spontaneous breathing is performed by the medulla oblongata. Deep breath relaxation is done by reducing the frequency of breathing 16-19 times a minute to 6-10 times a minute. Deep breath relaxation will stimulate the appearance of nitric oxide which will enter the lungs and even the brain center which functions to make people calmer so that the pain that is in a high state will decrease (Wardani, 2015).

After taking nursing action for 1 x 24 hours, it is expected that the pain level will decrease with the outcome criteria of Pain Level (L.08066): 1. complaints of pain decreased (5), 2. grimacing decreased (5), 3. restlessness decreased (5), then nursing actions are carried out in accordance with the nursing intervention standards as follows: 1. identify the location, characteristics, duration, frequency, quality, and intensity of pain. 2. provide techniques and pharmacology to reduce pain, 3. explain pain relief strategies. The first action is to identify the location, characteristics, duration, frequency, quality, and intensity of pain to determine the extent of pain experienced by the client. Furthermore, interventions are provided both through non-pharmacological techniques such as deep breathing and distraction, as well as pharmacology if needed, to reduce the perception of pain experienced. Deep breathing is expected to reduce anxiety and promote relaxation, while distraction techniques help distract the client from the pain. Education is also provided to explain how to relieve pain and the importance of these techniques to increase comfort and support the recovery process. With the consistent application of these interventions, it is expected that the intensity of pain in Mr. S can

be significantly reduced (Poktok Team). S can be significantly reduced (DPP PPNI Working Team, 2018).

The implementation of nursing actions to manage acute pain in Mr. S was carried out with structured steps to reduce the intensity of the pain he felt due to hematuria. After the initial assessment, the first intervention carried out was deep breathing and distraction techniques, which proved effective in relieving pain. The first step was to teach the deep breath technique. The client was asked to sit comfortably and close his eyes to improve concentration. Instructions were given to inhale deeply through the nose for 4 seconds, hold the breath for 4 seconds, then exhale slowly through the mouth for 6 seconds. This process is repeated for several minutes to help calm the nervous system, relax tense muscles, and reduce anxiety that can worsen pain perception. This technique is performed 3 times in one session, with a total duration of about 15 minutes per session.

The second step is to apply distraction techniques to distract the client from the pain. The client is invited to do a pleasant or interesting activity, such as listening to relaxing music or talking about a topic that the client is interested in. Focusing on these activities helps to reduce the client's attention to the pain. This distraction technique is done for 10-15 minutes in one session, and can be done several times a day according to the client's needs.

Both techniques are applied for 1 x 24 hours with regular supervision. During the implementation process, clients are educated about the importance of these techniques and how to do them independently to manage pain at home. Evaluation was carried out to monitor changes in pain levels based on the client's reported pain scale and observe whether there was a decrease in complaints of pain, grimacing, and restlessness. With the implementation of these steps, it is expected that Mr. S can feel a reduction in pain intensity and increased comfort.

Music therapy aims to enhance or improve the physical, emotional, cognitive, and social well-being of the person listening to it. Music can reduce sympathetic neuron activity, blood pressure, pulse and respiratory frequency as well as positive effects through muscle relaxation and mind distraction. Music therapy is music and its elements used professionally for action in medical, educational, and daily life areas in individuals, groups, families, or communities in an effort to maximize quality of life,

improve physical, social, communication, emotions, health and well-being of thought and spiritual (Haase, 2012). The purpose of music therapy is to reduce pain, express feelings, increase self-confidence, reduce fear, reduce anxiety and stress, increase independence, communication, and eliminate sadness and moodiness (Dofi, 2010; Rudystina, 2020).

The evaluation was conducted on September 25 after 1 x 24 hours of intervention given to Mr. S to treat acute pain caused by enlargement of the prostate. Based on subjective data, the client reported that the pain felt had decreased, with the pain scale decreasing to 2, which showed improvement although there was still pain that was intermittent. The client described the pain as stabbing in the lower abdomen, but the intensity was much lighter than before. Objectively, the client no longer grimaced or showed significant signs of pain, indicating that there was a reduction in the physical discomfort experienced. Vital signs were also stable, with blood pressure 108/76 mmHg, pulse 82 x/min, body temperature 36°C, respiratory rate 20 x/min, and oxygen saturation 98%.

Although complaints of pain have decreased, the nursing problem of acute pain is still not fully resolved. The evaluation results show the outcome criteria that although pain complaints have decreased (scale 4 from 5), grimacing and restlessness have decreased (5), but have not completely disappeared. This indicates that the interventions provided, such as deep breathing and distraction techniques, have had a positive impact on pain reduction, but still need to be continued to achieve more optimal results. Further follow-up measures will be required to address residual pain and further improve client comfort. Education on pain management will also continue to be provided to clients to support independent self-care.

Conclusion

Implementation of deep breathing to manage acute pain in Mr. S with Hematuria showed significant improvement in decreasing acute pain levels. Deep breathing and distraction techniques proved effective in reducing anxiety and distracting the client from the pain. However, follow-up is required to achieve more optimal pain reduction and prevent pain recurrence. Education on pain relief techniques and the importance of

self-care at home has also been delivered to the client. With continued support, it is hoped that Mr. S can feel further comfort and resume daily activities better.

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