

Acute Pain Management using a Combination of Deep Breathing Relaxation and Murotal Al-Qur'an in Clients with GERD: Case Study

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ABSTRACT

Introduction: GERD is also called a disease that appears in the stomach and causes gastric disorders. The most common symptoms of GERD are a burning sensation in the throat and chest area, a bitter taste on the tongue, and pain in the heart area. The limited implementation of non-pharmacological deep breathing relaxation therapy using Al-Qur'an murotals is the basis for carrying out research. The purpose of this paper is to analyze acute pain management in patients with GERD

Methods: A Case study design was used in this study with a sample size of three patients, namely patients with GERD aged 40-65 years at 'Aisyiyah Bojonegoro Hospital with acute pain nursing problems. The action given to overcome this acute pain by using a combination of deep breath relaxation with Qur'anic murotal given for 3 consecutive days and the pain scale is measured by a numerical pain scale. Data analysis used uses the SMART method (specific, measurable, achievable, relevant and time-bound goals)

Results: The results of the case study on the first day of the three patients felt pain in the abdomen with moderate pain category. The planned nursing intervention action is pain management with pain levels as an outcome criterion. Implementation was carried out for 3 days, the results showed that the patient's pain level decreased with a moderate level of pain scale.

Conclusion: Deep breathing relaxation therapy with murotal Al-Qur'an can reduce pain levels in patients with GERD. This can happen because deep breathing relaxation can reduce muscle tension and listening to Al-Qur'an murotals with clear rhythm and intonation can foster a feeling of calm and coolness in the heart so that it can reduce stress that has arisen from pain in GERD patients.

Keywords: GERD, Acute Pain Management, Deep Breathing Relaxation

INTRODUCTION

Indigestion is a set of symptoms in the upper gastrointestinal tract that include discomfort or pain in the gastro-duodenal area, burning, fullness, nausea or vomiting. The group of diseases that fall under the category of indigestion are dyspepsia, gastritis, and GERD (Gastroesophageal Reflux Disease). Of the three diseases, there are similarities in the symptoms that arise, namely the appearance of pain in the region of the liver, but there are differences in causes (Kementerian Kesehatan RI, 2018).

Based on epidemiological data, the prevalence of GERD in East Asia found in 2021 is based on geography, namely 19.6% in Central America, 17.6% in South America, 17.1% in Europe, 15.4% in North America, 14.1% in Australia, and 10% in Asia. According to the reset results of previous researchers, in 2020 the prevalence of GERD in primary referral hospitals in Jakarta reached 49% (Safitri, 2020). In June at Aisyiyah Bojonegoro Hospital, data on GERD patients reached 56 patients. From the data above, it can be concluded that the incidence of GERD in Asia is slowly increasing every year (Jung, 2021; Simadibrata et al., 2021).

Indonesians lack knowledge of the importance of maintaining gastric health and also lack knowledge of what dyspepsia, gastritis and GERD are. This has resulted in the high prevalence of these three diseases in Indonesia (Darmawan, et al., 2019).

GERD occurs due to the rise of stomach acid towards the esophagus. This condition occurs when the digestive tract connecting the mouth and stomach is irritated. The rise of stomach acid is a common condition, but it can cause heartburn or heartburn in the lower chest area. When swallowing, the circular band of muscle at the bottom of the esophagus, also known as the lower esophageal sphincter, relaxes. This is to allow food and fluid to flow into the stomach, after which the sphincter closes again. When this loosens due to disruption or weakening, stomach acid can flow back into

the esophagus causing irritation and inflammation. This problem occurs when the upper part of the stomach and sphincter move over the diaphragm, the muscle that separates the stomach from the chest. Normally, the diaphragm helps keep acid inside the stomach. But due to this disorder, the acid can rise up into the esophagus and cause the symptoms of this disease (Ndraha et al., 2016).

A person suffering from GERD will feel pain on a scale that increases until it is uncontrollable, because pain is very common and often appears in a person with a case of digestive system disease (Utami, 2018).

There are two common ways for health workers to relieve pain, namely by using drugs (pharmacology) and without drugs (non-pharmacology). For techniques without drugs (non-pharmacology) is done by compressing using warm water and can also use deep breath relaxation techniques. The compress technique using warm water is able to reduce the pain scale by relaxing the body muscles, improving blood circulation and can provide comfort to the patient (Amin, 2017)

Giving relaxation is part of a non-pharmacological method that is effective in reducing the pain scale. Relaxation that is done well will be able to relax tense muscles, reduce boredom, and also be able to relieve anxiety so that it can prevent an increase in pain intensity (Tri, 2019).

According to Smeltzer & Bare (2018) the recitation of the Qur'an physically contains the human voice and can be an accessible healing tool. Sounds delivered regularly with the right intonation and rhythm can reduce stress hormones, activate natural endorphins, and also increase feelings of relaxation for the listener. In addition, the recitation of Qur'anic verses can improve the body's chemical system, thereby lowering blood pressure and slowing breathing, heart rate, pulse and brain wave activity. Several studies have shown the effectiveness of murrotal therapy in overcoming pain and hemodynamic problems experienced by patients (Yana et al., 2019).

Sometimes even though the patient has been given analgesic drugs to relieve pain, the patient still feels pain. Therefore, a combination of pharmacology and non-pharmacology is needed to control and reduce pain (Harnita, 2021). Based on the above, the author is interested in applying a combination of deep breath relaxation therapy with Qur'anic murrotal to overcome acute pain problems that occur in GERD patients. The purpose of this study was to analyze acute pain management using a combination of deep breath relaxation with Qur'anic murrotal in clients with GERD.

METHODS

The type of research is an experimental case study with the aim of exploring nursing problems in clients with GERD. The method is a nursing care approach that includes five nursing processes namely assessment, diagnosis, planning, implementation and ends with a nursing evaluation process. The research subjects in this case study used by the author were three clients suffering from GERD who met the following criteria 1) Clients with GERD; 2) Clients with complaints of pain in the abdomen / heart; 3) Composmentis consciousness; 4) Willing to be a study subject and sign informed consent; 5) Patients who do not take pain relievers

This study was conducted at Aisyiyah Bojonegoro Hospital in July and August 2023, with a sample of 3 clients with GERD. The variable measured in this study was the client's pain level before and after the intervention. Data collection in this application is carried out by observing the implementation of a

combination of non-pharmacological pain management, namely deep breath relaxation with murotal al-qur'an. Application of pain level measurement through the PMS (pain measurement scale) method (Utami, 2018). Implementation of a combination of non-pharmacological pain management of deep breath relaxation with murotal al-qur'an was carried out 3 consecutive days on 3 clients with GERD.

The data collection tool in this study was to use the medical surgical nursing care format of FIKES Muhammadiyah University lamongan. Outcome and evaluation criteria are compiled based on the Indonesian Nursing Outcome Standards for pain levels (L.08066) (SLKI, 2017). The determination of the outcome criteria of each objective of the author is adjusted to the client's condition based on existing complaints with the SMART method (Specific: specific, Measurable: measurable, Aesureble: achievable, Reality: real, Time: the right time target) (Susiani, 2022).

RESULTS

Table 1 shows that there were two people who were female (2 people, 66.67%), and one person who was male (33.33%). All respondents were at the adult age of 40-65 years and were Muslim. Most of the respondents were married and had an elementary to high school education

Table. 1 Respondent Characteristics

No.	Client Data	Clie n 1	Clie n 2	Clie n 3
1	Name	Tn. I	Ny. S	Ny. T
2	Gender	Male	Female	Female

3	Age	61 Thn	43 Thn	51 Thn
4	Address	Bojonegoro	Bojonegoro	Bojonegoro
5	Religion	Islam	Islam	Islam
6	Jobs	None	None	None
7	Education History	None	SD	SMP
8	Tribe	Java	Java	Java
9	Marital Status	Married	Married	Married
10	Main Complain	Heartburn	Heartburn	Heartburn
11	Current Medical History	P : Pain due to disease symptoms Q : Stabbing pain R : Pain in solar plexus S : Pain scale 6 T : Intermitten pain	P : Pain due to disease symptoms Q : Stabbing pain R : Pain in solar plexus S : Pain scale 6 T : Intermitten pain	P : Pain due to disease symptoms Q : Stabbing pain R : Pain in solar plexus S : Pain scale 6 T : Intermitten pain
12	Past Medical History	None	None	None
13	Vital Signs	TD : 163/107 mmHg	Td : 129/80 mmHg	TD : 139/89 mmHg

Table 2. Nursing Diagnoses and Interventions

Nursing Diagnosis	Nursing Planning					
	Objectives & Outcome Criteria					Intervention
Acut Pain D.0077	Level Pain (L.08066) Objective: After 3x24 hours of nursing care, it is expected that the pain level will decrease					pain management (I.08238) Observation: 1. Identify the location, characteristics, duration, frequency, quality, intensity of pain 2. Identification of pain scale 3. Identify non-verbal pain
Definition:	Outcome Criteria:					
Acute pain is a sensory or emotional experience associated with actual or functional	Increased	Improved enough	Medium	Decreased Enough	Declining	
	1	2	3	4	5	
	2	3	4	5		
	3	4	5			
	4	5				

tissue damage, with sudden or slow onset and mild to severe intensity lasting less than 3 months.	1	2	3	4	5	<p>responses</p> <p>4. Identify factors that aggravate and alleviate pain</p> <p>5. Monitor the success of complementary therapies that have been provided</p> <p>Therapeutic</p> <p>1. Provide non-pharmacological techniques for deep breath relaxation and Qur'anic murotal to reduce pain</p> <p>2. Control the environment that aggravates pain (ex. room temperature, lighting, noise)</p> <p>3. Maintain normal body temperature</p> <p>Education</p> <p>1. Explain the cause of the period and pain triggers</p> <p>2. Describe pain relief strategies</p> <p>3. Advocates self-monitoring of pain</p> <p>4. Teach deep breath relaxation techniques and Qur'anic murotals to reduce pain.</p> <p>Collaboration</p> <p>1. Collaborative administration of analgesics, if necessary</p>
	5 Vomiting				5	
	1	2	3	4	5	
	6 Nausea				5	
	1	2	3	4	5	
	Worsening	Quite Worse	Medium	Fairly Improved	Improving	
	7 Pulse Rate				5	
	1	2	3	4	5	
	8 Breath Pattern				5	
	1	2	3	4	5	
9 Blood Pressure				5		
1	2	3	4	5		

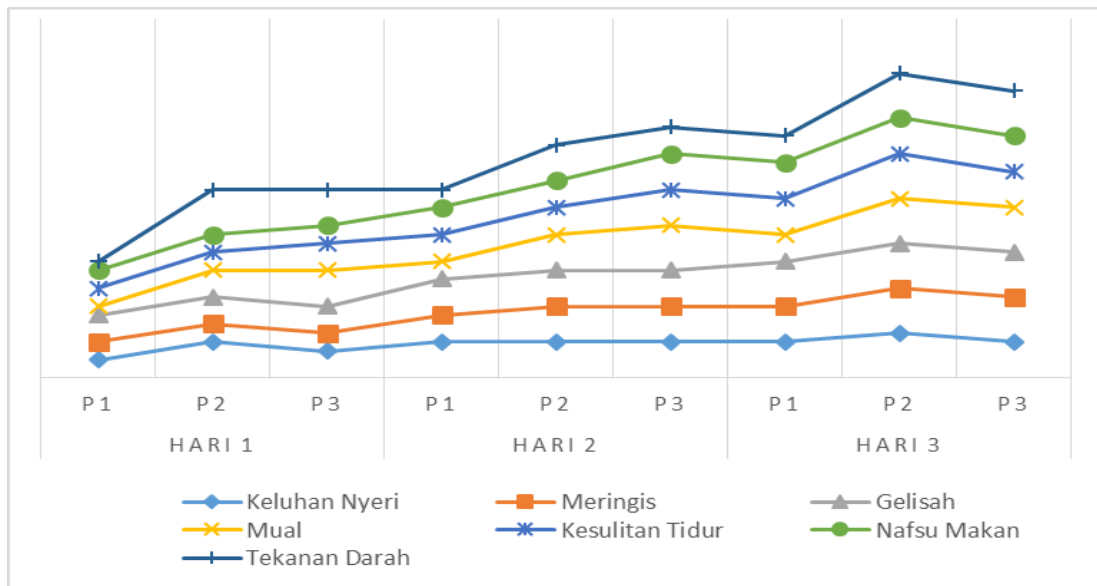


Figure 1 Progress notes on patient pain levels

DISCUSSION

Assessment Results

The assessment found that clients 1, 2, 3 said the pain in the solar plexus was like stabbing and pain was missing, the client looked grimacing and restless. Client 1 with a pain scale of 6, client 2 with a pain scale of 4 and client 3 with a pain scale of 5. Clients 1, 2, 3 complained of nausea and decreased appetite. Clients 1 and 2 complained that they could not sleep and were often awake during sleep and client 3 experienced throat discomfort when swallowing. Client 1 had a blood pressure of 163/107 mmHg, client 2 had a blood pressure of 120/80 mmHg and client 3 had a blood pressure of 138/89 mmHg.

The typical signs and symptoms of GERD are regurgitation and heartburn. Regurgitation is a state of reflux that occurs shortly after eating, characterized by a sour and bitter taste on the tongue. Heartburn is a burning sensation in the epigastric region that can be accompanied by pain and stinging. Both symptoms are generally felt after eating or when lying down (Saputera & Budianto, 2017). Symptoms of GERD include abdominal discomfort, bloating, headaches and nausea that can interfere with daily activities, epigastric discomfort, nausea, vomiting, stinging or burning pain in the upper abdomen that can get better or worse with meals, loss of appetite

and burping. Symptoms are also accompanied by fever, chills (Agus dalam Akbar & Utami, 2021). All three clients had typical symptoms of Gastroesophageal Reflux Disease (GERD) which included heartburn accompanied by nausea, vomiting and throat discomfort and decreased appetite. The pain response in GERD patients can arise due to too many activities that make patients forget to eat, which causes stomach acid to rise into the esophagus.

Nursing Diagnosis

Based on assessment data on clients 1, 2, 3, the main symptoms of the three clients with Gastroesophageal Reflux Disease (GERD) are nausea and the urge to vomit, pain in the solar plexus, and pain in several parts of the abdomen. Signs and symptoms data were found that were in accordance with the client's condition, so the nursing problem taken was acute pain. According to the SDKI Working Group Team (2017), there is symptomatic data in determining the diagnosis of acute pain with subjective major data, namely patients complaining of pain, subjective minor signs of patients having difficulty sleeping, and feeling restless. While objective minor data found the client had an increase in blood pressure and changes in appetite.

Pain is a sensation that is very unpleasant and varies in each individual who can affect a person's mind regulate their activities and can change the person's life. The problem of pain needs to be done through therapeutic communication because pain is a psychosocial factor that nurses need to assess subjectively and objectively in assessing pain. Pain caused by GERD can be controlled by controlling gastric acid production and preventing gastrointestinal inflammation through pharmacological and non-pharmacological treatments. Pain management that is done pharmacologically is by administering drugs. Pharmacological therapy for gastritis patients is considered unsatisfactory (Nuryanti, et al 2020).

Acute pain is a sensory or emotional experience associated with actual or functional tissue damage, with sudden or slow and mild to severe intensity lasting less than 3 months characterized by major symptoms including complaining of pain, grimacing, being protective, anxiety, increased pulse frequency and difficulty sleeping and minor symptoms including increased blood pressure, altered breathing patterns, altered appetite, withdrawal and self-focus (SDKI, 2017). Based on the results of the assessment, it was found that the average patient came with complaints of pain in the solar plexus accompanied by nausea and vomiting caused by the rise of stomach acid into the esophagus. The number of complaints of patients with heartburn, abdominal pain so that the author takes acute pain nursing problems (D.0077).

Nursing Interventions

Based on the analysis of assessment data and obtained a diagnosis of acute pain associated with physiological injury agents (D.077). So that nursing interventions that can be applied to reduce pain in GERD patients in accordance with SIKI are pain management (I.08238) which includes observation, education, therapy, and collaboration. In addition, the patient is also planned to get a deep breath relaxation therapy intervention with a combination of Qur'anic murotals given for three days, with success indicators referring to pain levels.

Non-pharmacological pain management by performing relaxation techniques, which are external actions that affect an individual's internal response to pain. Pain management

with relaxation measures includes muscle relaxation, deep breathing, massage, meditation and behavior. Relaxation is a state where a person is free from pressure and anxiety or the return of balance (equilibrium) after a disturbance (Rahmayanti, 2019).

Based on the nursing problems that arise, the author takes non-pharmacological acute pain management interventions, namely a combination of deep breath relaxation therapy with Qur'anic murotal because deep breath relaxation can reduce muscle tension caused by sensory pain stimuli. The presence of sound with good intonation can also cause someone to relax so that it can reduce the pain in the patient.

Implementation

Implementation of pain management with a combination of deep breath relaxation techniques with murotal Al-Qur'an for three days in patients with GERD with a frequency of 1 time a day, namely in the morning. The implementation was carried out on 3 patients with GERD with complementary therapy which is one of the non-pharmacological methods to treat acute pain.

Complementary therapy is a traditional and non-conventional treatment that is not from the country concerned and has been recognized to be used as conventional/medical therapy (Ludiana & Pakarti, 2021). Elyta et., al (2021) Research states that the provision of deep breath relaxation technique therapy in combination with murotal al-qur'an has an effect on reducing the epigastric pain scale in GERD patients carried out regularly will reduce pain intensity.

Relaxation techniques are one of them pain management which aims to relieve tension or stress both physically and psychologically so as to increase tolerance to pain (Aprilia & Novitasari, 2023). According to Berman (2018) Relaxation can relieve muscle tension, boredom and anxiety which will ultimately prevent severe pain. Deep breath relaxation technique is a form of nursing care, in which in this case the nurse teaches the client how to do deep breaths, slow breaths (maximum holding of inspiration) and how to exhale slowly. In addition to reducing pain intensity, deep breath relaxation techniques can also increase lung ventilation and improve blood oxygenation.

Murotal is one of the music that has a positive influence on the listener (Widaryarti, 2016). Listening to the verses of the Koran recited tartil and correctly, will bring peace of mind. The recitation of the verses of the Koran physically contains human elements which are healing instruments and the most accessible tools. Sound can reduce stress hormones, activate natural endorphins, increase feelings of relaxation, improve the body's chemical system so that it lowers blood pressure and slows breathing, heart rate, pulse and brain wave activity (Heru, 2008). According to Smith (in Upoyo, 2012) low sound intensity between 50-60 decibels creates comfort and painlessness and has a positive influence on the listener.

Evaluation

Evaluation of nursing actions taken in patients with Gerd 1, 2 and 3 for 3 days by performing a combination of deep breath relaxation with murotal al-qur'an to significantly reduce the intensity of acute pain in patients based on the SOAP technique. This shows that after being given an intervention for 3 days the three patients experienced a decrease in the intensity of the pain scale, namely from severe pain to mild pain. This is in line with Bakri's research (2022) with the title Analysis of Nursing Clinical Practice in Gerd Patients with Innovative Interventions of Deep Breath Relaxation with a combination of Warm Water Compresses on Decreasing Pain Intensity in the Emergency Room at Taman Husada Hospital Bontang 2022. The scale of pain intensity in gerd patients before the most relaxation is a pain intensity scale of 6. The scale of pain intensity in gerd patients after the most relaxation is a pain intensity scale of 3. So it can be concluded that there is an effect of relaxation on reducing pain intensity in GERD patients, namely a significant decrease in pain scale. This shows that the application of a combination of deep breath relaxation therapy with murotal al-qur'an points to a decrease in pain intensity in GERD patients so it is necessary to apply this therapy.

CONCLUSION

To reduce pain, independent nursing interventions are carried out by relaxing the muscles so that to overcome acute pain the

patient will feel relaxed. during deep breath relaxation with murotal al-qur'an, the supply of oxygen in the blood to the heart can increase. The implementation is carried out 1 time / day for 3 days so that it will experience a decrease in pain levels and cause comfort for the client. For further research, the results of this study can be used as a reference and reference for research sources related to nursing care and acute pain management in patients with GERD, especially in the use of combined non-pharmacological therapy.

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