

Article

APPLICATION OF FINGER HAND RELAXATION TO REDUCE POST LAPAROTOMY OPERATION PAIN IN BILATERAL CHOCOLATE CYST PATIENTS

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ABSTRACT

Chocolate cyst or what is often called endometriosis is a functional endometrial condition that experiences cyclic bleeding. Treatment of endometriosis can be done by laparotomy. One of the nursing problems that often arises in post-laparotomy patients is severe pain or acute pain. Pain can affect various things, such as physical, behavioral, and also affect daily activities. Thus it is necessary to handle it so as not to give a negative influence. One of the relaxation techniques that can be used to reduce postoperative pain is the finger hold relaxation technique or often called the finger hold. This type of research is a case study research, which was conducted on 1 patient, namely Mrs. N. She is the first day postoperative laparotomy patient. The focus of this study is the application of finger-hold relaxation therapy to reduce post-laparotomy pain in chocolate cyst patients. Finger hold therapy is taught and carried out 2 times a day, at least 4 hours after administration of analgesic drugs, namely in the morning before taking the medicine and in the afternoon after lunch. Before and after being given the finger-hold relaxation intervention, the patient's perceived pain scale was measured. Measurement of the pain scale using the Verbal Descriptive Scale" and "Wong Baker Pain Rating Scale". The results of this study showed that finger-hold relaxation therapy for 2 times a day in 2 days showed that the results of finger-hold relaxation could reduce the scale of postoperative laparotomy pain, from moderate pain to mild pain. Nurses are expected to apply finger-hold relaxation therapy as a management procedure in postoperative laparotomy patients with chocolate cysts.

I. INTRODUCTION

Chocolate cysts or what is often called endometriosis is a condition of the functional endometrium that experiences cyclic bleeding. Blood that collects in the abnormal focus causes reddish brown nodules or implants (Ham & Saraswati, 2018). The incidence of endometriosis at Dr. Sardjito in 2013-2018 obtained results from 119 women with chocolate cysts (Fatmawati *et al.*, 2020).

Endometriosis can be treated with laparotomy (Pramana, 2021). Laparotomy is a surgical procedure that involves opening the abdominal cavity through an incision. One of the nursing problems that often arises in post-laparotomy patients is severe pain or acute pain (Marlinda *et al.*, 2018). Acute pain is an unpleasant sensory and emotional experience related to actual and potential tissue damage (Herdman & Kamitsuru, 2023).

Based on the results of an assessment carried out on patients post laparotomy surgery for indications of bilateral chocolate cysts, it was found that the patient reported pain in the area of the surgical wound. Pain is closely related to the receptors and stimuli in our body. Pain receptors are located in the skin and mucosa areas, pain responds if there is stimulation or stimulation that occurs. The stimulation in question can be in the form of chemicals such as histamine, bradykinin, prostaglandins and acids which are released due to tissue damage due to lack of oxygen (Apriyani *et al.*, 2022). Post-laparotomy patient pain occurs due to the surgical incision which causes the body to produce pain mediators (Utami, 2016).

Pain, which is an occurrence of discomfort, in its development will affect various components in the body. The effects of pain can affect various things, such as physical, behavioral, and also influence daily activities (Andarmoyo, 2023). Thus, treatment is needed so that it does not have a negative influence.

Pain can be treated with pharmacological and non-pharmacological therapy. Pharmacological therapies that can be used to treat pain include opiates/narcotics, non-steroidal anti-inflammatory drugs (NSAIDs), adjuvant drugs and analgesic drugs. Meanwhile, non-pharmacological therapies that can be done include warm compresses, cold compresses, massage, acupuncture and relaxation (Rehatta *et al.*, 2019).

One relaxation technique that can be used to reduce post-operative pain is the finger hold relaxation technique or often called finger hold. Relaxation actions are actions that include diaphragmatic breathing exercises, progressive relaxation techniques, *guided imagery*, and the act of meditation. Finger hold relaxation is a very simple relaxation technique that is easy for anyone to do (Pinandita *et al.*, 2012).

Several studies state that there is an effect of providing finger-hold relaxation techniques on reducing pain intensity in post-operative patients (Tyas & Sadanoer, 2019; Rasyidah *et al.*, 2022). This non-pharmacological method was chosen to be given to post-operative patients because this method is an effective, comfortable, easy to use and cheap method so that all patients can receive services from this procedure (Fauji & Marlina, 2018). So researchers want to know how to apply finger grip relaxation to reduce pain in post-operative patients with indications of chocolate cysts.

II. METHODS

This type of research is Pre-experimental Design (Suhron, 2024). The focus of this research is the application of finger grip relaxation therapy to reduce pain after laparotomy surgery in chocolate cyst patients.

The implementation of the intervention was carried out over two days, namely from 3 June to 4 June 2022 at a hospital in Yogyakarta. The number of samples used in this research was 1 person. Namely Mrs. N who is 47 years old, a patient post-operative

laparotomy on the first day. The patient received ketorolac analgesic therapy 30 mg every 8 hours. Finger grip therapy is taught and carried out twice a day, at least 4 hours after administering analgesic medication, namely in the morning before taking the medication and in the afternoon after lunch. Before being given the finger grip relaxation intervention, the patient was measured on a scale of perceived pain. Then a finger grip relaxation intervention was given. Researchers provide an explanation of the purpose and steps for implementing finger grip relaxation. Researchers guide patients to carry out finger-hold relaxation therapy. Post-intervention, researchers recalculated the pain scale felt by the patient.

The instruments used in this research were Standard Operating Procedures (SOP) for implementing finger grip relaxation techniques and pain measurement instruments. The SOP for the finger grip relaxation technique was prepared based on references and previous research, namely Pinandita's research *et al.* (2012) and Astutik & Kurlinawati (2023). Pain scale measurement using "*Verbal Descriptive Scale*" and "*Wong Baker Pain Rating Scale*". *Verbal Descriptive Scale* is a measuring tool that describes pain through measuring lines consisting of three to five words. These lines are arranged at equal distances, ranging from no pain to very severe pain. The way to measure pain is to show the patient where on the scale the pain is currently felt. *Wong Baker Pain Rating Scale* is a measurement of pain based on visuals or images. Consists of six pictures ranging from no pain to severe pain with a pain score of 0-10 (Uliyah & Hidayat, 2021).

III. RESULT

After being given finger grip relaxation therapy, there was a change in the pain scale in patients after laparotomy surgery. The following are the results of monitoring the patient's pain scale before and after being given finger grip relaxation therapy within 2 days of implementing the intervention.

Table 1.
Results of monitoring the patient's pain scale, Mrs. N

No	Day, date, time	Pain Scale	
		Pre-intervention	Post-intervention
1	Jum'at June 3, 2022 Jam 14.00	5	4
2	Saturday June 4, 2022 Jam 07.30	4	3
3	Saturday June 4, 2022 Jam 14.00	3	2

Source: Primary data 2022

Based on the table above, it can be seen that jari handheld relaxation therapy can reduce pain in patients post laparotomy surgery for chocolate cyst indications. This is proven by the pain scale on the first day of finger grip relaxation, the pain scale went from 5 to 4. When carrying out finger grip relaxation on the second day, the results of the pain scale in the morning went from scale 4 to scale 3. And in the afternoon after it

was done. Relaxing the finger grip again resulted in a pain scale from scale 3 to scale 2. So it can be said that the pain felt by the client decreased, from a moderate level of pain to a mild level of pain.

IV. DISCUSSION

The results of this study showed that there was a decrease in the pain scale in post-operative laparotomy patients with chocolate cysts after being given finger-hold relaxation therapy. This supports previous research conducted by Pinandita *et al.*, (2012) that there was a difference in the pain scale in post laparotomy patients between pre and post in the experimental and control groups after finger grip relaxation therapy.

Another study conducted on post-operative appendectomy patients also obtained similar results, namely that there was a decrease in the pain scale after performing the finger grip relaxation technique (Rasyidah *et al.*, 2022; Sulung & Rani, 2023). The finger-hold relaxation technique also has an effect on reducing pain intensity in post-caesarean section surgery patients, there is a change in the average pain intensity after this intervention (Dolang & Pattipeilohy, 2023; Saputra *et al.*, 2019)

Pain is an uncomfortable sensation that is subjective and caused by a specific stimulus where each individual feels pain in a different way. This happens because it is influenced by psychosocial factors, culture and each person's endorphins. Pain in post-laparotomy surgery occurs due to an incision wound at the surgical site, this location becomes painful due to chemical mediators produced from the body. Pain is subjective and can result in emotional sensations and unpleasant psychological states that occur due to actual or potential tissue damage according to Potter & Perry, (2010) in (Utami, 2016).

Pain management by performing finger grip relaxation techniques is an external action that can influence a person's internal response to the pain they feel (Pinandita *et al.*, 2012). Apart from providing non-pharmacological therapy, giving analgesics can also reduce the pain scale.

The finger hold relaxation technique is not a substitute for analgesic drugs prescribed by a doctor. However, this finger grip relaxation is useful for shortening the time or pain episodes that last a few minutes. In this study, patients received the analgesic drug ketorolac 30 mg every 8 hours intravenously (IV). Ketorolac is a non-narcotic analgesic which is commonly used as an anti-pain medication after surgery with safer side effects than other types of analgesics. The action of this drug is to inhibit prostaglandin synthesis by blocking the cyclooxygenase enzyme (Smith *et al.*, 2007). IV drug administration is given for no less than 15 seconds. The analgesic effect of this drug will work in approximately 30 minutes with a maximum effect of 1 to 2 hours. Meanwhile, the half-life of this drug is 4 to 6 hours (Ainun *et al.*, 2022).

The finger-hold relaxation technique is given 7-8 hours before analgesic administration, or at least 4 hours after analgesic administration. This is done so that the results of reducing pain after laparotomy surgery that are felt are a reaction to the finger grip relaxation therapy carried out, not because of the effects of the ketorolac drug (Pinandita *et al.*, 2012).

Finger hold relaxation technique or *finger hold* is a technique that is easy to use by anyone. This technique is related to the fingers and the flow of energy in the body (Muzaki *et al.*, 2021). The finger-hold relaxation technique is carried out by grasping the fingers one by one using the palm of the other hand, while the patient is given suggestions about feelings of anxiety or fear about the pain. The patient is also asked to close his eyes, focus on inhaling slowly from the nose and exhaling through the

mouth. And patients are advised to relax more by imagining that the patient is around the family and believe that the pain will disappear, patients are also advised to get rid of the pain they feel (Astutik & Kurlinawati, 2023).

In this study, the pain felt by patients decreased, from moderate to mild. The decrease in the pain scale occurs because the movement in finger-holding relaxation therapy, namely the movement of holding the finger while controlling the breath or what is often called (relaxation) has a good impact, namely it can reduce physical and emotional tension. Emotions will be controlled so that the body relaxes, painful stimuli are blocked and pain is reduced. When holding a finger, impulses will be generated which are sent via non-nociceptor afferent nerves as a counter-stimulation of pain in the cerebral cortex, causing the intensity of pain to change or experience modulation due to the relaxation stimulation of holding the finger which reaches the brain first and more (Pinandita *et al.*, 2012).

Holding your fingers can warm the exit and entry points of energy in our hands. The points on the hand will provide a spontaneous reflex when the fingers are gripped, then this stimulation channels energy to the brain. This stimulation sends a kind of shock wave and electricity to the brain and is processed quickly, then forwarded to the nerves in the body organs that are experiencing problems so that blockages in the energy pathways become smooth and pain is reduced (Norma *et al.*, 2020). Apart from that, feeling relaxed will also naturally trigger the release of the hormone endorphin, this hormone is a natural analgesic from the body so that pain will be reduced.

So, it can be concluded that this finger grip relaxation technique is a non-pharmacological pain management that can be used to help reduce post-operative pain in patients.

V. CONCLUSION

Based on the results of this study, it can be concluded that the application of finger-held relaxation therapy can reduce the pain scale of patients post laparotomy surgery, namely from moderate pain to mild pain.

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