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The Implementation of Dhikir Therapy to Reduce Pain in Patients with Post – Open Reduction Internal Fixation (ORIF)

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Abstract. Fracture is a state of breaking or crumbling of the bone due to impact or pressure that causes the bone to not fuse completely. The incidence of fractures in the world in 2020 is 2.7%, in Indonesia in 2018 there were 1.3 million cases (5.5%) and in Yogyakarta it reached 64.5%. One of the fracture treatments is surgery which will cause pain. Nonpharmacological management to reduce pain includes the implementation of dhikir therapy. The purpose of this case study is to implement dhikir therapy in reducing pain in post ORIF fracture patients. The method used in this case study is descriptive method. Dhikir therapy began on day 1 and was performed twice a day after 5 hours of analgesic administration with a duration of action of 25 minutes. The respondent in this study was a post ORIF fracture patient in the Cendana 3 ward of RSUP Dr. Sardjito Yogyakarta and selected based on predetermined inclusion criteria. The pain felt by respondents before and after dhikir therapy was observed using the NRS pain scale. The results of this study indicate that there is a difference in pain scale, before the implementation of pain felt on a scale of 6 (moderate pain) and after the implementation of pain felt on a scale of 1 (mild pain). The results showed that dhikir therapy can reduce pain in post ORIF fracture patients.

1 Introduction

Fracture or fracture is a condition where damage occurs such as breaking or crushing the continuity of the bone so that the bone cannot be fused perfectly. Fractures are usually caused by several things such as trauma or injury due to falls, impacts, blows, or due to other diseases that can cause bones to become brittle (1). Based on data from the World Health Organization (WHO), the incidence of fractures in the world has increased from 2020 to more than 13 million people with an incidence rate of 2.7%. According to data from Basic Health Research (2018), fracture incidents in Indonesia are 1.3 million cases with a prevalence of 5.5% and the highest cause is traffic accidents.

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Meanwhile, data in the Special Region of Yogyakarta states that the incidence of fractures is 64.5% (2).

Fractures that are not treated immediately will cause many problems such as trauma to the nervous system, and blood vessels, and the occurrence of more severe complications in the bones will worsen the condition of fracture sufferers (3). Management that can be done in patients with fractures can be done surgically or without surgical measures such as immobilization of the fractured part of the body. Meanwhile, in patients who undergo surgery, it will usually cause pain effects that make the patient uncomfortable and can also be a *stressor* for the patient while in the hospital (4). Pain can cause the sufferer to experience changes in activity patterns, appetite, breathing becomes faster, an increase in pulse rate, an increase in blood pressure, causing stress, fear and disruption to the patient's sleep patterns (5).

Pain management is divided into 2, namely pharmacological and non-pharmacological ones. Pharmacological pain management is carried out by administering analgesics while non-pharmacological pain management is carried out by changing positions and administering therapies such as relaxation therapy, meditation, and distraction (6). Distraction applied to patients with post-ORIF fractures can divert the patient's attention, thereby reducing awareness of pain and even increasing pain tolerance (7). One of the distraction therapies that can be done in patients with post-ORIF fractures is dhikir therapy. Dhikir therapy is a type of therapy that is carried out to surrender to Allah while saying spiritual words that mean praise to Allah with an orderly rhythm so that it can reduce the pain felt (8). The administration of dhikir therapy to reduce pain can be done 6 to 12 hours after surgery or 5 to 6 hours after the administration of analgetics as companion therapy or independent activities of nurses (9).

According to research conducted by Noskivianti & Silvitasari, 2023 (10) the pain felt by patients after 3 days of dhikir therapy has changed significantly, wherein the first respondent the pain scale before being given dhikr therapy, namely scale 6 (moderate pain) is reduced to scale 3 (mild pain). Meanwhile, in the second respondent, a pain scale of 6 (moderate pain) was obtained and after being given dhikir therapy, the pain was reduced to a scale of 2 (mild pain). This means that the dhikir therapy provided is effective in reducing pain in postoperative fracture patients. This happens because dhikr will produce medical and psychological effects that balance serotonin and endorphin levels in the body, which are natural morphine and work in the brain, causing the heart and mind to calm down after dhikr, thereby reducing pain (11).

Based on the description above, the author is interested in taking a case study on "Implementation of Dhikir Therapy to Reduce Pain in Post ORIF Fracture Patients".

2 Method

2.1 Research Design

This research is descriptive in the form of a case study that aims to obtain an overview by observing and analyzing accurate data according to facts so that it is easy to understand.

2.2 Location and Subject of Research

This research was carried out in Cendana Ward 3 of Dr. Sardjito Hospital Yogyakarta. The respondent in this study was a 24-year-old woman with a Medical Diagnosis of an Open Fracture of the Distal Third of the Right Humerus.

2.3 Data Collection Methods

This research has been declared ethically appropriate by KEPK Poltekkes Kemenkes Yogyakarta with Ethical Clearance number No.DP.04.03/e-KEPK.1/375/2024. Data collection methods used in this research included conducting interviews and interacting directly to ask questions and listen to what was said by respondents and obtain information in identifying the pain felt by post-ORIF fracture patients. During the research, the author also made observations for 4 days to observe the patient's behavior and condition regarding the problem they were experiencing and used a rating scale to observe the scale of the pain they felt. Patients who agreed to be respondents in this study were given an informed consent which was then signed by the patient and family as witnesses. Respondents then had their pain scale measured before dhikir therapy was carried out using the Numerical Rating Scale (NRS) and continued by giving analgesics to the patient. The researcher then guided the respondents to carry out dhikr therapy 4 to 6 hours after giving analgesics for approximately 15 to 20 minutes. This dizkir therapy begins with reading Istighfar (Astaghfirullahaladzim), tasbih (Subhanallah), tahmid (Alhamdulillah), takbir (Allahuakbar) 33 times and continues with reading tahlil (Laailahaillaallah) 1 time. The scale of pain felt by respondents after being given the implementation of dhikir therapy was then measured again using the Numerical Rating Scale (NRS).

2.4 Sampling Procedure

Respondents involved in this study were selected based on previously established inclusion criteria, namely a Muslim patient with a medical diagnosis of post-operative fracture starting on D-0, a patient with composmentis awareness and feeling pain on a moderate scale (scale 4 to 6), able to do dhikr, aged 20 to 50 years, patients who did not have speech disorders, and were willing to undergo dhikr therapy at the time of the research. During the implementation of the research, researchers carried out dhikr therapy on respondents starting on day 1 because they took into account the condition of respondents on day 0 who still felt pain on a severe scale (pain scale 7). However, researchers continued to observe respondents from day 0 until respondents were allowed to go home on day 4.

3. Result and Discussion

3.1. Result

The following is Table 1 which explains the results of measuring the pain scale before and after dhikir therapy:

Table 1. Results of Pain Scale Measurement Before and After Dhikir Therapy

It	Day/Date	Hour	Pain Scale	
			Before	After
1.	Wednesday 13/03/2024	11.00 am	6	6
2.	Wednesday 13/03/2024	07.00 pm	6	5
3.	Thursday 14/03/2024	11.00 am	5	4
4.	Thursday	07.00 pm	4	3

	14/03/2024			
5.	Friday 15/03/2024	11.00 am	3	3
6.	Friday 15/03/2024	07.00 pm	2	1
7.	Saturday 16/03/2024	11.15 am	2	1

The following is a chart of the pain scale before and after dhikir therapy:

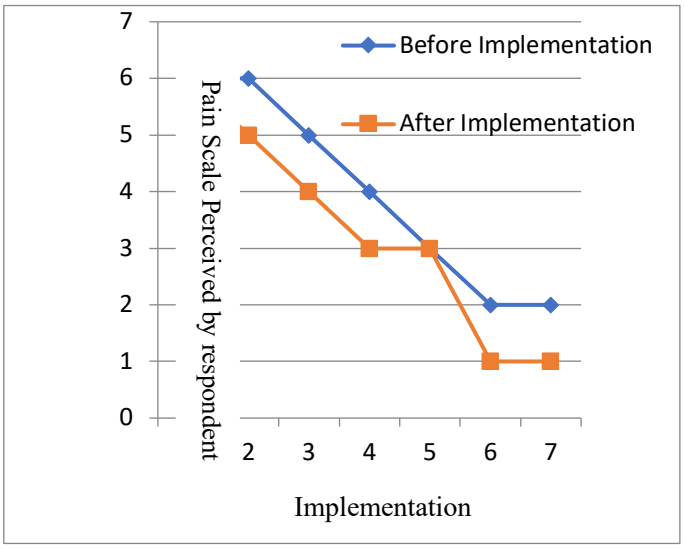

Fig. 1. Graph 1. Pain Scale Chart Before and After Dhikir Therapy

Based on the table and graph above, it shows that there is a decrease in the pain scale before and after implementing dhikir therapy. Wednesday, March 13, 2024 at 11.00 WIB, a pain scale measurement was carried out on the respondents. Pain scale measurements were carried out 5 hours after respondents were given analgetics. Then the researcher guided the respondents to do dhikir therapy for approximately 25 minutes. After doing dhikir therapy, the scale of pain felt by the respondents was again measured. Respondents said that the pain they felt had not decreased, which remained on a scale of 6. On the same day, at 19.00 WIB, dhikir therapy was again carried out. Before dhikir therapy was given, pain was felt on a scale of 6 and then dhikir therapy was carried out for approximately 25 minutes. After dhikir therapy is completed, the pain scale felt again is measured using the NRS pain scale. Respondents said that the pain they felt had decreased, from a pain scale of 6 to a scale of 5. When dhikir therapy is carried out, the respondent is cooperative and able to carry out the therapy well.

On the second day, Thursday, March 14, 2024 at 11.00 WIB, dhikir therapy was again carried out which began with a pain scale measurement and the results of the pain scale before the action were obtained on a scale of 5. The respondent was then given dhikir therapy and after completion, the scale of pain felt by the respondent was again

measured. The respondent said that the scale of pain he felt had decreased, which was on a scale of 4. At 19.00 WIB, dhikir therapy and pain scale measurement were carried out again before starting therapy, the results of the pain scale felt were at a scale of 4. The researcher then guided the respondents to do dhikir therapy which was then followed by measuring the pain scale. The results were obtained that the pain scale felt by the respondents began to improve, namely from a pain scale of 4 to a pain scale of 3.

On the 3rd day, Friday, March 15, 2024 at 11.00 WIB, dhikir therapy was carried out which began with measuring the pain scale and the results were obtained that the pain was felt on a scale of 3. Dhikir therapy was again carried out on the respondent and continued with the measurement of the pain scale after the administration of dhikir therapy. Respondents said that pain remained felt on a scale of 3. At 19.00 WIB, dhikir therapy was again carried out and began with measuring the pain scale before the action with a scale of 2 and after the pain action felt on a scale of 1 (mild pain).

On the 4th day of implementation, which is Saturday, March 16, 2024, the researcher again guided the respondents to do dhikir therapy, which began by measuring the scale of pain felt first. Respondents were given dhikr therapy consistently for 25 minutes, after the completion of the pain scale was measured again and the result was obtained that the pain felt by the respondent gradually decreased from before the pain action felt on the scale of 2 and after the pain action felt to the pain scale 1 (mild pain).

3.2. Discussion

The selection of research respondents is carried out based on the inclusion criteria that have been set. The researcher selected Muslim patients with a Medical Diagnosis of Postoperative Fracture starting from day 1 because the researcher considered the condition of the respondents on day 0 which did not allow the implementation of dhikir therapy. After all, at the time of the assessment, the respondents still felt pain on a severe scale (scale 7 to 8). The pain scale is set on the inclusion criteria in this study, namely the moderate pain scale (4 to 6) which is adjusted to previous research which proves that dhikir therapy is effective in reducing mild pain (scale 1-3) to moderate pain (scale 4-6) (12). Meanwhile, the vulnerable age is taken, which is 20 to 50 years old, based on the results of previous research which states that at productive age they have high mobilization so they are prone to injury due to accidents, as well as those who are about to enter the elderly phase are also at risk of experiencing a decrease in bone strength (13).

Respondents who stated their willingness to be involved in this study were given an informed consent sheet which was then filled out and signed by the respondent and their families as witnesses. Informed consent is very necessary because every medical action carried out includes research that contains risks so that with the informed consent that has been signed by the respondent, the risks that will be faced can be minimized and the research carried out will not harm the respondent (14).

The next step is to measure the pain scale using the Numerical Rating Scale (NRS). The use of the NRS pain scale in this study is based on research conducted by (15) which states that the NRS is considered simpler and easier to understand so it is very suitable for use in adult and conscious patients, but it does not rule out the possibility of being used in children over 3 years old. In this study, analgetics are given to reduce pain caused by various stimuli (16), as well as to fulfill the ethical concept in research that prioritizes the moral rights and obligations of research respondents, including respondents who continue to receive drugs, including analgesics, during the research process (17).

The next stage is to guide respondents to do dhikir therapy which begins with closing their eyes and reading *Basmallah* 1 time, followed by reciting istighfar *(Subhanallah),* tasbih *(Subhanallah),* tahmid *(Alhamdulillah),* takbir *(Allahuakbar)* 33 times each and ending with the recitation of tahlil *(Laaillahaillallah)* which is said 1 time which is calculated using a prayer bead. This dhikir therapy is a non-pharmacological therapy for Muslims, by listening to and chanting the holy verses of the Qur'an can calm the heart and mind so that it can reduce the intensity of pain that is discharged, especially in postoperative patients (8). Dhikir therapy is carried out 5 hours after the administration of analgetics to avoid confusion about the efficacy of dhikir therapy with the pharmacological effects of the given drug because the half-life of analgesics ends at 4 to 6 hours after the drug is administered (7). Meanwhile, another study conducted by (18) stated that dhikir is carried out 3 to 4 hours after the administration of analgetics so that it is not affected by the effects of the drug and the results are more accurate. The implementation of this therapy is carried out for approximately 25 minutes because the dhikir therapy process requires concentration of the mind focused on Allah SWT continuously (4). Meanwhile, during the implementation of the study, the researcher carried out dhikir therapy for 15 to 20 minutes, this is by research conducted by (19) that during the 15 to 20 minutes of dhikir therapy, respondents felt calmer and more comfortable so that the pain felt was reduced.

Research that has been conducted on respondents shows that there is a difference in the scale of pain felt before and after dhikir therapy, before the dhikir therapy was given the pain felt by respondents was felt on a scale of 6 (moderate pain), after implementing dhikir therapy there was a gradual decrease in the pain scale and the results were obtained on a pain scale of 1 after 7 times of dhikir therapy. This happens because dhikir will produce medical and psychological effects that can balance serotonin and endorphin levels in the body which are natural morphine and work in the brain, resulting in the heart and mind becoming calmer after dhikir (11). This study is in line with research conducted by (20) which stated that there was a decrease in pain scale before and after the implementation of dhikir therapy in respondents. The first responder experienced a decrease in the pain scale after 3 days of dhikir therapy where the pain scale felt before therapy was on a scale of 6 (moderate pain) and after the pain therapy decreased on a scale of 2 (mild pain). In the second respondent, there was also a change in the pain scale, where before dhikir therapy, the patient complained of pain on a scale of 4 (moderate pain), and after 3 days the implementation of pain dropped to a scale of 1 (mild pain). This happens because the series of sentences spoken during dhikr are aimed at surrendering and remembering Allah, which can cause the body to become calmer, thereby suppressing the body's release of endorphin hormones as an inhibitor of the transmission of pain impulses (21).

3.3 Research Limitation

The limitations experienced by the researcher in the process of collecting data in the case study regarding the implementation of dhikir therapy to reduce pain in patients with fracture post open reduction internal fixation (ORIF) in the Cendana 3 ward of Dr. Sardjito Hospital Yogyakarta include that this study only focuses on one (1) respondent so that the researcher cannot compare the results that may be different if this therapy is given to other respondents.

4 Conclusion

The conclusion of this study is to describe the implementation of dhikir therapy to reduce pain in Post Open Reduction Internal Fixation (ORIF) fracture patients. The pain felt by the respondents slowly decreased after 7 times of dhikir therapy from the initial pain scale of 6 (moderate pain) and after dhikir therapy, the pain scale decreased to a scale 1 (mild pain). Therefore, it can be concluded that dhikir therapy is effective in reducing the scale of pain in patients with post-Open Reduction Internal Fixation (ORIF) fractures.

5 Suggestion

It is hoped that dhikir therapy can be one of the alternative treatments for the community to reduce the scale of pain, especially in patients with fractures after Open Reduction Internal Fixation (ORIF) considering that this therapy is very easy to do, the author also hopes that in future studies it can include a larger number of respondents so that diverse results can be obtained and comparisons can be known.

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