http://ejournal.seaninstitute.or.id/index.php/healt
Jurnal Eduhealt, Volume 14, No. 04 2023
E-ISSN. 2808-4608

The Effect Of Range Of Motion (Rom) Measures On Pain In Dextra Femur Fracture Patients At Home Pematang Siantar Army Sick Year 2023

Azis Mangara[1], Riska Wani Eka Putri Perangin-angin[2]
[1,2]Akademi Keperawatan Kesdam I/BB Pematangsiantar, Indonesia

ARTICLE INFO

Keywords:
Influence, ROM, Pain in right femur fracture patients.

ABSTRACT

Range of motion (ROM) is an exercise that moves joints and allows contraction and movement in muscles. The aim of the research is the Effect of Range of Motion (ROM) Actions on Pain in Dextra Femur Fracture Patients at the Pematang Siantar Army Hospital in 2023. The research method uses a quantitative research design with a quasi-experimental type. This research is a quasi-experimental design using a pre-test and post-test with a one group pre-test post-test design approach. The population of the study was 40 people and a sample of 36 people with inclusion criteria: the patient had a right femur fracture, willing to be a respondent. The research results showed that the p-value = 0.000 < a = 0.05, so the research hypothesis was accepted, so it could be concluded that there was an influence of Range of Motion (ROM) measures on pain in right femur fracture patients at the Pematang Siantar Army Hospital in 2023. Conclusion: pain in right femur fracture patients before being given the Rango of Motion (ROM) procedure with severe pain was 36 people (100.0%). Pain in right femur fracture patients after being given the Rango of Motion (ROM) procedure with "mild" pain was 6 people (16.7%), and the number of respondents with "moderate" pain was 30 people (83.3%).

Email :
azismangara83@gmail.com
riskawani07@gmail.com

1. INTRODUCTION

A fracture or broken bone is a condition where the continuity of bone and/or cartilage is broken which is generally caused by force and also caused by trauma or physical force which is determined by the type and extent of the trauma. The cause of fractures is trauma which is divided into direct trauma, indirect trauma and mild trauma [1]

Femur fracture in this study is a break in the continuity of the femoral shaft which can occur due to direct trauma (accidents, falls from heights and is usually experienced more by adult men. Femur fracture is one of the major traumas in the field of orthopedics. It is said to be a major trauma because the femur bone is The bones are very strong, so a very large trauma is required to cause a femur fracture [2]

According to the World Health Organization (WHO) in 2018, the highest injuries resulting from traffic accidents were found in several Latin American countries (41.7%), South Korea (21.9%), Thailand (21%). Traffic accidents are the most common cause of fractures, 5.6 million people died due to accidents and 1.3 million people suffered from fractures or physical disabilities [3]

In fact, Indonesia is the third Asian country behind China and India with a total of 38,279 traffic accidents. According to the Central Java Provincial Health Service, traffic accident victims in the Central Java region in 2018 recorded the number of victims who died as many as 4115 people, 97 people with serious injuries, 21967 people with minor injuries [4].

Based on Indonesian Health Profile Data and Information in 2016, disaster events according to the type of transportation accident disaster, the presentation rate was 47.7%, in 2015 it was 84% and in 2016 it was 74%. Based on data from the Indonesian Ministry of Health, it was found that around 8 million people experienced fractures with different types of fractures and different causes. From the

results of a survey by the Indonesian Ministry of Health team, it was found that 25% of fracture sufferers died, 45% experienced physical impairment [5].

Data from the Central Java Provincial Health Service (2017), found that around 2,700 people experienced fracture incidents, 56% of sufferers experienced physical disability, 24% experienced death, 15% experienced recovery and 5% experienced psychological disorders or depression due to the fracture incident. Data from medical records of Dr. Orthopedic Hospital. R. Soeharso Surakarta in 2018 recorded 2,220 cases resulting in fractures in the lower extremities, while in February 2019 there were 362 patients with fractures in the lower extremities [6].

One of the signs and symptoms of a fracture is pain. Pain is the most common symptom found in muscoskeletal disorders. Pain is a sensory or emotional experience related to actual or functional tissue damage, with sudden or slow symptoms. The pain felt in fracture patients is sharp and stabbing pain. Other impacts caused by fractures include limited activity, pain due to motor and sensory nerve activity in the fracture tissue [7]

Doing ROM movements is one technique that can be used to reduce pain because it can maintain muscle strength, improve blood circulation, and maintain joint mobility. ROM exercise from an early age can also improve blood circulation so that oxygenation in wounds is better, nutritional intake and medicines can be absorbed well [8]. According to research from Bactiar, 2018, Range of Motion (ROM) exercises are an important activity in the post-operative period to restore the patient's ability to carry out specific activities in relation to daily life routines such as bathing, dressing, toileting and so on. other. Because physical disabilities can be recovered sustainably through range of motion exercises, namely Range of Motion (ROM) exercises [9].

Based on research conducted by Anggita (2015), it was found that one of the rehabilitation measures that can be carried out is ROM (range of motion). Most of the respondents experienced a decrease in joint motion in fracture patients with the greatest degree of joint motion, namely 125° with a percentage of 50%, after The ROM of joint motion in fracture patients was increased by 10°- 25° [10]. Post op fracture effects can be prevented by doing Range Of Motion (ROM) exercises. ROM is exercise carried out to maintain or improve the level of perfection of the ability to move joints normally and completely to increase muscle mass and muscle tone. The aim of Range of Motion is to reduce the risk of contractures and prevent thrombus formation [10]

At the Pematang Siantar Army Hospital, researchers found when conducting an initial survey that there were 50 patients with fractures in the dextra femur recorded in the last 3 months, with 40 cases of dextra femur fracture. Of the 50 people who experienced fractures, there were 5 people experienced fractures of the upper extremities and 5 people experienced manibula fractures. When conducting an initial survey, researchers saw that the many activities of the soldiers during training made them move a lot such as running, jumping, jumping from one training place to another, making them experience Many people experience injuries to the right femur because the right femur is usually the strongest support when starting activities.

2. METHOD

This research uses a quantitative research design with a quasi experimental type. This research is a quasi-experimental design using a pre-test and post-test with a one group pre-test post-test design approach. The population in this study were all patients who experienced dextra femur fractures at the Pematang Siantar Army Hospital, namely 40 people. The sampling technique in this study was Non Probability Sampling, namely the Purposive Sampling method. This research consists of two variables, namely the independent variable.) and the dependent variable. Measurement of ROM actions in this study uses Standard Operating Procedures (SOP) with the assessment seen using an observation sheet, if "done" the value is 1 and if "not done" the value is 0. After all the results are collected, Then the data will be processed using a computerized system. Pain improvement is carried out using the VAS measuring scale, namely mild: 0, moderate: 1, severe: 2, after the data is obtained. Will be processed into a computerized system. Data analysis uses univariate data analysis and bivariate data analysis.

3. RESULTS AND DISCUSSION

Result

Results of research conducted on 36 respondents regarding the effect of Range of Motion (ROM) procedures on pain in right femur fracture patients at the Pematang Siantar Army Hospital in 2023.

Univariate analysis results

Pain description in right femur fracture patients before Rango of Motion (ROM) treatment

The description of pain in right femur fracture patients before being given the Range of Motion (ROM) procedure is described in table 1 below:

Table 1 Distribution of Respondents Based on pain in right femur fracture patients before being given the Rango of Motion (ROM) procedure at the PematangSiantar Army Hospital in 2023.

No	Pain in pre-fracture patients	Frequency	Percentage
1.	Heavy	36	100,0
	Total	36	100,0

Table 1 above shows that the number of respondents based on pain in right femur fracture patients before being given the Rango of Motion (ROM) procedure with severe pain was 36 people (100.0%).

Description of pain in right femur fracture patients after being given the Range of Motion (ROM) procedure.

The description of pain in right femur fracture patients after being given the Range of Motion (ROM) procedure is explained in table 2 below:

Table 2 Distribution of Respondents Based on pain in right femur fracture patients after being given the Rango of Motion (ROM) procedure at the PematangSiantar Army Hospital in 2023.

No	Pain in fracture patients after	Frequency	Percentage
1.	Light	6	16,7
2.	Currently	30	83,3
	Total	36	100,0

Table 2 above shows that the number of respondents based on pain in right femur fracture patients after being given the Rango of Motion (ROM) procedure with "mild" pain was 6 people (16.7%), and the number of respondents with "moderate" pain was 30 people. (83.3%).

The effect of pain on right femur fracture patients before and after being given the Rango of Motion (ROM) procedure at the Pematang Siantar Army Hospital in 2023 can be explained in table 3 below:

Table 3 Frequency Distribution of Respondents based on pain in right femur fracture patients before and after being given the Rango of Motion (ROM) procedure at the Pematang Siantar Army Hospital in 2023.

Action	**Pain in right femur fracture patients**						**Total**
***Rango Of Motion* (ROM)**	**Light**		**Currently**		**Heavy**		
	N	**%**	**N**	**%**	**N**	**%**	
Before doing it	**0**	**0**	**0**	**0**	**36**	**100,0**	**36**
Sesudah Dilakukan	**6**	**16,7**	**30**	**83,3**	**36**	**100,0**	
						p-value = 0,000	

Table 3 above shows a table based on pain in right femur fracture patients before and after being given the Range of Motion (ROM) procedure, before the Range of Motion (ROM) procedure, the pain felt by patients with "severe" pain was 36 people (100, 0%), and after the Rango of Motion (ROM) procedure, the pain felt by 6 patients (16.7%) was "mild" pain, and 30 people (83.3%) felt "moderate" pain. Based on the analysis results from the Paired T-test, the p-value = 0.000 < a = 0.05, the research hypothesis is accepted, so it can be concluded that there is an influence of Range of Motion (ROM) on pain in right femur fracture patients at home. Pematang Siantar Army Sickness in 2023

Discussion

Description of pain in right femur fracture patients before being given the Range of Motion (ROM) procedure.

In the opinion of the researchers, when the researchers carried out a pre-test by looking at the patient's condition, it was found that most of the respondents complained of severe pain in the fracture area before surgery and experienced obstacles in their activities. This is in accordance with the theory about the impact of trauma on fractures, including limited activity, due to pain due to rubbing of motor and sensory nerves in fracture wounds.

Description of pain in right femur fracture patients after being given the Range of Motion (ROM) procedure.

In the opinion of the researcher, after carrying out a light Range of Motion (ROM) procedure after several days of surgery, the condition of the fractured femur improved slightly, although the respondent initially did not want to do it, afraid of re-fracture because the operation had just been carried out, the researcher convinced the respondent to do the Range of Motion (ROM) in a simple way, such as starting to teach the patient to move the extremities to avoid muscle stiffness.

The effect of the Range of Motion (ROM) procedure on pain in right femur fracture patients before and after being given the Range of Motion (ROM) procedure.

Based on the analysis results from the Paired T-test, it was obtained that p-value = 0.000 < a = 0.05, then the research hypothesis was accepted, so it can be concluded that there is an influence of Range of Motion (ROM) on pain in right femur fracture patients in the Hospital Pematang Siantar Army in 2023. After the second day of nursing care, the patient was able to move his legs 90°, but was still assisted by a nurse and the patient was able to move from bed to wheelchair, and was able to sit and tilt to the right and left, as well as move from bed to sitting. After nursing care on the 3rd day, the patient had learned to walk using a walking aid (crutches).

According to researchers, ROM procedures are very influential in healing patients with fracture problems, because with ROM procedures that are carried out immediately, muscle strength returns to function as before the fracture, with persistence from the nurse and support from the family as well as seriousness from the patient, will improve the condition. The patient improved after being hospitalized.

4. CONCLUSION

Based on the results and discussion, the conclusion from this thesis is that the influence of Range of Motion (ROM) measures on pain in right femur fracture patients at the Pematang Siantar Army Hospital in 2023 is: Description of pain in right femur fracture patients before being given the Rango Of Motion (ROM) procedure, pain in right femur fracture patients before being given the Rango Of Motion (ROM) procedure with severe pain was 36 people (100.0%). Description of pain in right femur fracture patients after being given the Rango Of Motion (ROM) procedure, pain in right femur fracture patients after being given the Rango Of Motion (ROM) procedure with "mild" pain as many as 6 people (16.7%), and the number of respondents with "moderate" pain was 30 people (83.3%).The effect of pain on right femur fracture patients before and after being given the Range of Motion (ROM) procedure, p-value = 0.000 < a = 0.05, so the research hypothesis is accepted, so it can be concluded that there is an influence of the Range of Motion Action (ROM) on pain in right femur fracture patients at the Pematang Siantar Army Hospital in 2023.

REFERENCES

[1] Agustina et all, (2020). Pengelolaan Ketidakefektifan Perfusi Jaringan Perifer Pada Pasien Post ORIF Hari Ke-3 Atas Indikasi Fraktur Femur Dextra 1/3 Distal Di RSUD Ungaran. Indonesian Journal of Nursing Research, Vol 3 No 2, November 2020/ page 41-48.

[2] Ananda, (2017). Pengaruh Range Of Motien (ROM) Terhadap kekuatan otot pada lansia Bedrest di PSTW budhi Mulia 3 Marga Guna Jakarta Selatan.

[3] Bachtiar, (2018). Penerapan Askep Pada Pasien Ny. N Dengan Post Operasi Fraktur Femur Dextra Dalam Pemenuhan Kebutuhan Aktivitas. Jurnal Media Keperawatan: Politeknik Kesehatan Makassar Vol. 09 No 02 2018 e-issn : 2622-0148, p-issn : 2087-0035.
[4] Baiturrahman et all, (2018). Pengaruh Exercise Range Of Motion (Rom) Pada Pasien Post Operasi Fraktur Ekstremitas Terhadap Intensitas Nyeri Di Rsud Dr. Soedarso Pontianak.
[5] Black, M.J. & Hawks,H J, (2014). Medical surgical nursing : clinical management for continuity of care, 8th ed. Philadephia : W.B. Saunders Company.
[6] Igiany, (2018). Faktor Yang Mempengaruhi Pasien Post Op Fraktur Untuk Melakukan Range Of Motion (ROM). Jurnal Manajemen Informasi dan Administrasi Kesehatan (J-MIAK) Volume 01, No 02, Tahun 2018 ISSN: 2621-6612 Email: d3perinfokesunivet@gmail.com Halaman: 18
[7] Kurniawan, (2018). Hubungan Pemberian Latihan Range Of Motion Terhadap Kekuatan Otot Pada Pasien Post Operasi Fraktur Tertutup Di Ruangan Rawat Inap Rs Bhayangkara Hasta Brata Batu.
[8] Notoadmodjo, (2012). Metodologi Penelitian. Jakarta. Rineka Cipta.
[9] Permana et all, (2015). Pengaruh Range Of Motion (Rom) Terhadap Intensitas Nyeri Pada Pasien Post Operasi Fraktur Ekstremitas Bawah. JOM Vol 2 No 2, Oktober 2015.
[10] Potter. P. A. & Perry,A.G. (2013). Fundamental of Nursing; Eighth Editionst. Louis: Mosby Elsevier, Inc.
[11] Prasetyo, (2020). Efektivitas Elevasi 15° Ekstremitas Bawah Dalam Mengurangi Tingkat Nyeri Pada Pasien Post Operasi Fraktur Ekstremitas Bawah. BACHELOR'S DEGREE PROGRAM IN NURSING KUSUMA HUSADA COLLEGE OF HEALTH SCIENCES OF SURAKARTA 2020.
[12] Smeltzer, Suzanne C & Bare, Brenda G. (2014). Keperawatan Medikal Bedah. Jakarta: EGC.