Health Gate
Volume 2 Number 1 January 2024 ISSN 2986-1098
Homepage: https://healthgate.ppnikotablitar.com

DOI:https://doi.org/1https://doi.org/10.7011/hg2104
Submited : December,10 2023
Reviewed: December, 15 2023
Accepted : January, 14 2024

Early Mobilization in Patients Post Operation for Femur Fracture

Maulidya Amalia Putri[1*] , Maximiano Oqui[2] , Andi Hayyun Abiddin[3]

[1,3]Departement of Nursing, Ministry of Health Polytechnic, Blitar, Indonesia , maulidyaamaliaputri@gmail.com
[2]Departement of Nursing, National Timor Lorosa'e University, Timor Leste m888@gmail.com

ABSTRACT

A fracture is a break in the continuity of a bone. The injury recovery process may not go perfectly if the patient cannot move after surgery. Of course, this condition will affect the length of time the patient is considered in the emergency clinic. The recovery that medical staff should be able to carry out in patients with post-operative femur fractures is to complete the initial assembly. Early mobilization is an effort to pursue freedom as quickly as possible by directing the victim to follow physiological capabilities. The motivation behind this study was to determine the impact of early preparation practices on postoperative femoral fracture patients. This research was conducted in the Surgery Room at Ngudi Waluyo Wlingi Regional Hospital. The technique used is a quantitative illustrative examination strategy with an overview type. The population was 5 respondents with post-operative femur fractures treated in the work room, who were examined using an all out examination procedure. Information is obtained through perception. Considering the side effects of the review, it was shown that most of the 60% of respondents with post-operative femur fractures were dependent on others. It stands to reason that there is an impact of movement practices in post-operative femur fracture patients that would encourage a longer stay in the emergency clinic. Patients who are recovering from surgery need to start mobilizing as soon as possible to ensure smooth blood flow, speed wound healing, and minimize hospitalization..

Keywords: Early mobilization, post-operative femur fracture, dependency

Background

A femur fracture is a discontinuity in a fracture that can occur directly or indirectly as a result of trauma. Fractures are caused by significant bleeding or even shock, and long-term injuries can cause morbidity, and can lead to disability if proper treatment is not received. However, the most common complication is wound infection (1). It is important to detect the possibility of infection early so that prevention can be carried out either by wound care or administering antibiotics. Hemoglobin levels, fracture configuration, and tissue damage are thought to be the risk factors that contribute most to the incidence of infection in closed lower extremity fractures (2). The results of the study showed that all open fracture patients (100%) experienced high bacterial colonization before surgery but did not experience wound infections 3 days after surgery (3). Infectious conditions in fractures will prolong the treatment period and limit mobilization.

Fractures are the result of trauma, some fratures are the result of pathological processes such as osteoporosis which is a pathological fracture. The World Health Organization (WHO)

Correspondent*

Health Gate
Volume 2 Number 1 January 2024 ISSN 2986-1098
Homepage: https://healthgate.ppnikotablitar.com

in 2019 stated that there were around 15 million incidents related to femur fractures. The incidence of femur fractures in the world is estimated at 12.9 million per year. As many as 91% occur in developing countries with an incidence of 15.7 to 45.4 per 100,000 population. Indonesian basic health research 2018 maintains the frequency of cracks in Indonesia in 2018 at 5.5%, especially in East Java in 2018 there were approximately 20 million people with a prevalence rate of 3.8% and in 2019 it increased to 21 million people with a prevalence rate of 4. 2% due to traffic accidents (4) . Researchers conducted a preliminary study in January, data on patients with femur fractures at Ngudi Waluyo Wlingi Regional Hospital, especially in the Surgery Room in the last 3 months starting from October to December 2022, there were 6 patients. Femur fractures are a serious problem and the impact of this problem will disrupt daily activities in the productive age group and can cause complications that increase mortality. The impact of efforts to reduce this risk requires an independent early mobilization action program. Care and treatment measures for patients with limitations have not been fully determined after anticipating and discovering cracks that will occur if medical action is not taken (5)

Early mobilization is a post-operative patient's effort or ability to move their body parts so they can fulfill their activity needs to maintain their health according to the patient's condition. Mobilization is an individual's ability to move calmly and effectively for a solid life. Everyone needs to move, loss of the ability to move forms habits and requires mediation (6). The results of a case study in a patient with a femur fracture, treatment that improves the ability to bear weight and gait will speed up the patient's ability to perform ADL again

The importance of early mobilization is to improve circulation and prevent postoperative complications and increase the speed of patient recovery. The main causes of contractures are absent or insufficient joint mobilization due to muscle strength imbalance, neuromuscular diseases, burns, extensive traumatic injuries, inflammation. So researchers want to identify the extent to which femur fracture patients who have undergone fixation surgery are able to carry out early mobilization.

Methods

This study used a quantitative descriptive design to determine patient consistency in early mobilization of post-operative femur fracture patients who were observed using a checklist. The population of this study were post-operative femur fracture patients. The research location is the surgical room at Ngudi Waluya Wlingi Hospital from March to April 2023.

Results

Characteristics Respondents

Table 1 Description of the Characteristics Respondents

Characteristics Respondent	Frequency	Percentage (%)
Gender		
Male	3	60
Female	2	40
Age		
21-40	1	20
41-60	3	60
>60	1	20
Last education		
Bachelor	1	20
Junior high school	1	20

Correspondent*

Health Gate
Volume 2 Number 1 January 2024 ISSN 2986-1098
Homepage: https://healthgate.ppnikotablitar.com

Senior high school	2	60
Work		
Doesn't work	1	20
Entrepreneur	1	20
Civil servant	2	60

This research obtained from 5 respondents, 60% (3 respondents) were male and 40% (2 respondents) were female, 20% (1 respondent) aged 21-40, 60% (3 respondents) aged 41-60, 20 % (1 respondent) aged >60. 20% (1 respondent) had elementary school education, 20% (1 respondent) had junior high school education, 60% (3 respondents) had high school education. 20% (1 respondent) does not have a job, 20% (1 respondent) works as an entrepreneur/entrepreneur, 20% (1 respondent) works as a private/employee, 40% (2 respondents) works as a civil servant.

The level of early mobilization in post-operative femur fracture patients

Activity	Patient Mobilization Rate											
	0		1		2		3		4		5	
	F	%	f	%	f	%	f	%	f	%	f	%
Changing Positions			20	100	80	100		100		100		100
Moving Feet	20	100					80	100				
Sit					20	100	20	100	60	100		
Stand											100	100
Walk											100	100

This study obtained from 5 respondents the level of early mobilization, including: changing positions with assistance with a minimum of 4 patients (80%), moving legs with the need for supervision from another person as many as 4 patients (80%), sitting with assistance with a maximum of 3 patients (60%), standing required full assistance for activities in 5 patients (100%), walking required assistive devices in 5 patients (100%).

Discussion

Based on the research results, it can be seen that the majority of post-operative femur fracture patients undergo early mobilization with a degree of dependency which is characterized by the patient turning to the right and left slowly even with the help of another person, and some respondents feel uncomfortable because the patient feels pain and feels painful when moved. It was stated that almost half of respondents with post-operative femur fractures felt afraid to move after orthopedic rehabilitation (7). Early mobilization after fracture surgery is very important. The research results show that patients who experience limited mobility, for example due to delirium within 2 days after surgery, require special treatment by a physical therapist (8).

The time for early mobilization depends on normal conditions, after several hours of rest the patient can carry out early mobilization with light movements. This can be seen from observations that all respondents have not fully carried out early mobilization. Research result shows that a person's level of dependency will increase after trauma and after surgery (9). Based on these findings, it can be seen that the majority of patients with femur fractures are over 50 years old. Age and developmental status also influence basic daily activities. The client's age and developmental status influence the patient's inability to carry out early

Correspondent*

mobilization(10). The results of a case study in a patient with a femur fracture, treatment that improves the ability to bear weight and gait will speed up the patient's ability to perform ADL again (11). Early post-operative mobilization is carried out for hip fractures, but does not rule out the possibility of being applied to femur fractures (12). ROM intervention can also be given to patients with post-extremity fractures as an effort to reduce muscle and joint stiffness and prevent muscle atrophy in patients(13).

Research result shows that changing positions as often as possible, prohibiting patients from positioning their limbs in a swinging state, practicing functional activities has proven to be effective for femoral fracture patients with impaired physical mobility and support. Data, namely the evaluation of patients who appear able to sit in a sitting position, able to carry out functional activities. From the patient's perspective, the researcher's question is the factors that cause cooperative patients with the characteristics of respondents wanting to carry out early mobilization(9)

The principles in treating femur fractures include: repair of the structure, pivot, length of the fracture, maintenance of blood supply to support and prevent disease and restoration of boundaries and the patient. Muscle preparation is very helpful for maintaining muscle strength and tone and developing further blood flow(14). Postoperative activation strategies are changing in general, for some specialists inaction in patients for fear that excessive bone and metal buildup will lead to loss of initial setting, fragile tissue repair, poor functional results, and the need for reoperation.

The effect of the intricacies of movement causes patients to stay longer in the clinic and have a dependency on the welfare of workers due to the use of assistive devices for walking. Patients are more comfortable without using assistive devices to walk (15). Another impact of long-term immobilization on fractures is joint stiffness(16)

Conclusion and Recommendations

Based on research results, post-operative femur fracture patients who underwent early mobilization had a high level of dependence in moving and meeting daily activity needs. Most patients worry about their body being moved in a certain position.
So there is a need for education about the importance of early mobilization in post-operative femur fracture patients

Acknowledgment

We would like to thank the director of Ngudi Waluya Wlingi Hospital who has provided the opportunity to carry out research.

References

1. Luhur LJ. Gambaran Karakteristik Pasien Fraktur Terbuka Ekstremitas Bawah Di Rumah Sakit. Nurs Arts. 2021;15(1):60–6. https://doi.org/10.36741/jna.v15i1.134
2. Putra Juniantara IGBIA, Kawiyana IKS, Ridia KGM, Astawa P, Suyasa IK, Dusak IWS, et al. Kadar hemoglobin, konfigurasi fraktur, dan kerusakan jaringan sebagai faktor risiko terjadinya infeksi luka operasi pasca open reduction internal fixation fraktur tertutup tulang panjang ekstremitas bawah. Medicina (B Aires). 2021;52(1):6. https://doi.org/10.15562/medicina.v52i1.1032
3. Azzarani S. Gambaran jumlah koloni sebelum dan sesudah operasi terhadap infeksi luka pada pasien fraktur terbuka di kota Jambi. Universitas Negeri Jambi; 2023.
4. PRIZKA MELIA R. INTERVENSI SLOW DEEP BREATHING UNTUK MENGURANGI INTENSITAS NYERI PADA PASIEN CEDERA KEPALA RINGAN.

Correspondent*

STIKes Muhamadiyah Ciamis; 2022. Available from: http://repository.stikesmucis.ac.id/id/eprint/332/
5. ANNISA'USH S. PENGARUH MOBILISASI DINI TERHADAP PENINGKATAN KEKUATAN OTOT PADA PASIEN PASCA STROKE ISKEMIK DI RSUD DR. HARJONO PONOROGO. STIKES Bhakti Husada Mulia; 2017. Available from: https://repository.stikes-bhm.ac.id/156/
6. Putri A, Setyaningsih M, Wibowo wibowo. Nursing Care for Postoperative Clients with Lower Extremity Fractures with Impaired Physical Mobility Problems. STIKes Panti Waluya Malang; 2019.
7. Gusty RP. Pemberian Latihan Rentang Gerak Terhadap Fleksibilitas Sendi Anggota Gerak Bawah Pasien Fraktur Femur Terpasang Fiksasi Interna Di RSUP. Dr. M. Djamil Padang. NERS J Keperawatan. 2014;10(2):176. https://doi.org/10.25077/njk.10.2.176-196.2014
8. Said C, Delahunt M, Ciavarella V, Maliki D, Boys A-M, Vogrin S, et al. Factors Impacting Early Mobilization Following Hip Fracture: An Observational Study. J Geriatr Phys Ther [Internet]. 2021;44(2). https://doi.org/10.1519/JPT.0000000000000284
9. Widiyawati A, Maryana, Mardalena I. Penerapan mobilisasi dini pada asuhan keperawatan pasien post operasi frakture femur dengan gangguan pemenuhan kebutuhan aktivitas di RSUD Sleman. 2017. Available from: http://eprints.poltekkesjogja.ac.id/1360/
10. Wulansari NMA, Ismonah, - S. PENGARUH AMBULASI DINI TERHADAP PENINGKATAN PEMENUHAN ACTIVITY OF DAILY LIVING (ADL) PADA PASIEN POST OPERASI FRAKTUR EKSTREMITAS DI RSUD AMBARAWA. 2015;4(1):1–23.
11. Kapre J, Vaidya L, Walke R, Chitale N, Arora SP, Phansopkar P. Effect of early mobilization and gait training in post-operative winquisht type-IV, shaft femur fracture. J Med Pharm Allied Sci. 2022;11(2320):305–9.
12. Sarkies MN, Testa L, Carrigan A, Roberts N, Gray R, Sherrington C, et al. Perioperative interventions to improve early mobilisation and physical function after hip fracture: a systematic review and meta-analysis. Age Ageing. 2023;52(8):1–11.
13. Yulianita H, Sugiharto F, Fitria N, Setyorini D, Permana A, Aviera B, et al. Pengaruh Range of Motion Terhadap Peningkatan Kemampuan Activity Daily Living pada Pasien Pasca Operasi Fraktur Ekstremitas Bawah: Narrative Review. Malahayati Nurs J. 2023;5(11):3739–51. https://doi.org/10.1093/ageing/afad154
14. Lilis K, Roning Angkawidjaja L, Alam Gentar I, Eka W. Kesehatan Olahraga Sports Medicine. 2019;159.
15. Rahcmat N. Optimasi Performal pada pasien post amputasi Transfemoral [Internet]. Ponorogo: Grasias Logis Kreatif; 2020. Available from: https://books.google.co.id/books?hl=en&lr=&id=d08aEAAAQBAJ&oi=fnd&pg=PA76&dq=Pengaruh+rumitnya+pergerakan+menyebabkan+pasien+lebih+lama+berada+di+klinik+dan+memiliki+ketergantungan+terhadap+kesejahteraan+pekerja+akibat+penggunaan+alat+bantu+berjalan.+&ots
16. Sukmawati R, Tarmizi MI. MANAGEMENT FISIOTERAPI PADA FRAKTUR TIBIA DI RS UNIVERSITAS SEBELAS MARET SURAKARTA: CASE REPORTOlehYunita Nur Rochmah1, Isnaini Herawati21, 2Program Studi Profesi Fisioterapi, Universitas Muhammadiyah Surakarta, Surakarta, Jawa Tengah, IndonesiaEmail: 1y. TjyybjbAcCn [Internet]. 2022;27(2):58–66. Available from: http://117.74.115.107/index.php/jemasi/article/view/537

Correspondent*