

PHYSICAL THERAPY MANAGEMENT FOR POST OP TIBIA PLATEU DEXTRA: A CASE STUDY

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Abstract

Introduction: Fracture or fracture is a form of bone continuity disorder caused by direct or indirect trauma. Fracture treatment is divided into 3 stages, namely restoring the position of the bone to its anatomical shape, maintaining the position of the bone for some time / immobilization and restoring function / rehabilitation, so that a patient will be able to return to activities without significant obstacles. Physiotherapy with various exercise therapy modalities can reduce pain and improve LGS so that patients can be active and productive again. Exercise therapy that is usually given to improve LGS is conventional exercise therapy such as passive stretching and special mode exercise therapy such as hold relax.

Case Presentation: Mrs. T was 52 years old on May 6, 2022 while walking the patient fell while descending 1 stair due to wrong support and then fell with support on the outer right knee which caused the bone to fracture / crack after that surgery was carried out on May 7 , 2022 and the patient was treated for 4 days until May 11, 2022. After that the patient is referred by a rehabilitation doctor to perform physiotherapy actions at PKU Muhammadiyah Sukoharjo Hospital

Management and Outcomes: Patients undergo therapy three times in two weeks with a physiotherapy program that includes Infra Red, TENS, Quadriceps Set, Hamstring and Gastroc Stretching, Mobilization Exercises on the legs, Kicking exercises using Ankle, Kicking exercises with the therapist's body resistance. Patients were evaluated using the Visual Analog Scale (VAS) and Manual Muscle Testing (MMT).

Conclusion: After receiving physiotherapy treatment with physiotherapy modalities and exercise therapy plus a home program that has been carried out by the patient, the results are decreased pain, increased muscle quality and decreased edema in the patient's right leg.

Keywords: Tibia Plateu, Infrared, TENS, Quadriceps Setting, Exercise, Physiotherapy

Introduction

Fracture is a form of bone continuity disorder caused by direct or indirect trauma. Fracture treatment is divided into three stages, namely (1) restoration of the position of the bone in its anatomical form / reduction, (2) maintaining the position of the bone for some time / immobilization and (3) restoration of function (rehabilitation) so that a patient will be able to return to activities without getting obstacles. meaning (Appley, 1995). However, due to surgery, it will still cause problems, including swelling and pain. Existing pain will increase when the joint around the fracture is moved. As protection, it will automatically increase muscle tension (muscle spasm). This results in an increase in pain and a decrease in the range of motion (LGS).

Proximal tibial fractures are common with incidence. Those transferred will require surgical treatment to reduce the risk of malalignment, post-traumatic osteoarthritis, and decreased functional outcome. Surgical treatment involves reduction of the fracture, management of the subchondral bone defect with bone replacement, and fixation of the fracture with an angled stabilized plate. There is no consensus on whether or not it is possible to bear weight after osteosynthesis of a proximal tibial fracture, regardless of the fracture type. The initial weight bearing concern in proximal tibial fractures is the risk of articular collapse. The AO Foundation recommends not bearing weight for 10-12 weeks after surgery for proximal articular tibial fractures. However, Small observational studies have reported early weight bearing after osteosynthesis of a proximal tibial fracture without an increased risk of subsequent articular collapse. However, the surgical technique was not formally described in this study. Initial load bearing may be important for rehabilitation and good functional outcome and is important for the elderly because non-heavy bearings are four times more demanding when walking. The demands most often cannot be met by older patients and therefore require support. Initial load bearing may be important for rehabilitation and good functional outcome and is important for the elderly because non-heavy bearings are four times more demanding when walking. The demands most often cannot be met by older patients and therefore require support. Initial load bearing may be important for rehabilitation and good functional outcome and is important for the elderly because non-heavy bearings are four times more demanding when walking. The demands most often cannot be met by older patients and therefore require support (Hare et al., 2020).

Case Presentation

Mrs. T was 52 years old on May 6, 2022 while walking the patient fell while descending 1 step due to wrong support and then fell on the right knee which caused the bone to break, after that surgery was performed on May 7, 2022 and the patient was treated for 4 days until May 11, 2022. After that the patient is referred by a rehabilitation doctor to

perform physiotherapy actions at PKU Muhammadiyah Sukoharjo Hospital.

Physiotherapy performed a functional examination of the knee and the results were weakness in the lower limbs, especially the thigh and calf muscles. On static inspection, there were surgical scars on the patient's knee and swelling in the calf, for dynamic inspection the patient's right leg was not able to withstand the weight of the body when standing and the right leg still felt very heavy.

In addition, physiotherapists also measure functional ability using the Lower Extremity Functional Scale (LEFS) and pain scale measurements using the Visual Analog Scale (VAS). Physiotherapists also perform anthropometric measurements to measure muscle mass.

Management and Outcome

The physiotherapy process here uses several therapeutic modalities consisting of Infra Red directed at the right knee and right calf to relax the muscles. Tens is also given in the right thigh and right calf which serves to reduce pain while reducing swelling.

After providing therapeutic modalities, physiotherapy also provides exercise therapy to patients which serves to strengthen the Quadriceps, Hamstring, Gastroc, Anterior Tibial muscles and reduce pain in the patient's thighs and calves. Therapeutic exercises here consist of Quadriceps sets, Stretching of the hamstring and gastroc muscles, leg mobilization exercises, kicking exercises with the ankles, kicking exercises with the feet as well as being given prisoners by the therapist.

VAS pain

Painful	T0	T1	T2
Shut Up	3	2	1
Motion	4	4	3

MMT

MMT	T0	T1	T2
Knee	3	4	4

Discussion

The physiotherapy program carried out for post OP patients with Tibia Plateau aims to increase the range of motion of the joints, increase muscle strength, and increase the patient's functional activities (Binkley JM et al., 2011). Stretching aims to increase the range of motion of the joint, keeping the patient from increasing stiffness or contractures. Strengthening aims to increase strength in the weak right knee. Functional exercise aims to help the patient to be able to perform

movements or activities that involve the right knee and be able to walk without assistive devices / independently (Wahyono & Utomo, 2016).

Conclusion

After receiving physiotherapy treatment with physiotherapy modalities and exercise therapy plus a home program that has been carried out by the patient, the results are decreased pain, increased muscle quality and decreased edema in the patient's right leg.

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