

# Handling Survey Physiotherapy Sprain ACL Injuries in Clinic Physiotherapy PhysioSET Malang

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## ABSTRACT

Compared to traditional medicine, physiotherapy is more reliable because patients are treated by specialist physiotherapists and physiotherapists with modern tools. Physiotherapy at the PhysioSET Physiotherapy Clinic handles patients with injuries caused by exercise using modern equipment. The purpose of the research conducted at PhysioSET Physiotherapy Clinic in Malang City is to find out how to manage sprain injury physiotherapy in PhysioSET Physiotherapy Clinic in Malang City. The data analysis technique used in this study is the triangulation technique. The triangulation technique was carried out to reassure the practices carried out by the physiotherapist together with the basic theory of physiotherapy at the PhysioSET Physiotherapy Clinic. The research subjects taken were about the management of physiotherapy for sprain injuries in the PhysioSET Physiotherapy Clinic. The approach used is a qualitative descriptive approach with the type of research using the survey method. The type of data used is in accordance with the role of the researcher as a participant observer, namely interview data and observation data. The results of the research at the PhysioSET Physiotherapy Clinic are the management of physiotherapy in the PhysioSET Physiotherapy Clinic as well as theories. Management of physiotherapy at the PhysioSET Physiotherapy Clinic does not use internal medicine for the treatment process until its recovery. To deal with patients who experience pain and swelling, the PhysioSET Physiotherapy Clinic uses an ice compress technique. PhysioSET Physiotherapy Clinic also uses tools for handling patients including rubber, kinesiology tape, electrical tens, infrared, ultrasound, balance pad.

**Keywords:** *Physiotherapy, Sprain injury.*

## 1. INTRODUCTION

We encounter many sports everywhere, there are recreational sports and achievement sports. Sports is to train one's body as a supporter of the quality of human life, because sport can provide benefits for physical and mental health. In addition to the many benefits of exercise, it does not rule out the possibility of a person when doing sports occur minor or severe injuries, even sports that are done with the right and proper techniques can still be affected by unexpected accidents that cause injury. Injuries in sports can occur through contact or non-contact mechanisms and may be acute or excessive [1].

Severe injuries include: 1) minor injuries: injuries that do not follow significant damage to the tissue,

swelling does not affect the appearance, for example blisters, bruises. 2) moderate injury: there is tissue damage, pain, real swelling, disturbing appearance, for example sprain, strain grade 2. 3) severe injury: severe tissue damage, large swelling, unbearable pain, unable to appear / must stop exercising [2].

Physiotherapy for ACL sprain injuries is carried out according to the area and severity of the injury suffered by the patient. This ACL sprain injury must immediately receive medical attention so that ligament tears are not getting worse. Physiotherapy is part of medical science in the form of non pharmacological physical interventions with the main goal of curative and rehabilitative health disorders. Severe damage to the ligament or joint capsule can cause instability in the

joint. Physiotherapy or physical therapy in language is a treatment technique with physical (physical) modalities.

Some physical modalities that are used include: electricity, sound, heat, cold, magnetism, motility and water. This physical modality then becomes the basis of physiotherapy application [3].

Physiotherapy is one of the handling of sports injuries that aim to restore bodily functions after being injured by performing treatment to recovery by involving a physiotherapist. Physiotherapy also involves a patient for discipline and activeness to do physiotherapy in order to get maximum results in healing. Physiotherapy clinics already exist in several cities in Indonesia, physiotherapy clinics in Malang are called PhysioSET Physiotherapy. Physiotherapy began as a profession in 1894, as a response to traditional massage to create professional physical rehabilitation [4]. Physiotherapy uses several components from various treatment approaches to improve strength, balance, speed of the parts of the body that have been injured [5].

Physiotherapist practitioners will work with medical practitioners after a period of training and clinical supervision for patients performing care outside of clinical management [6]. Physiotherapy is seen as a refinement of traditional medicine that cannot be ascertained the basis of the theory.

Prevention to recovery of sprain injuries is a basic aspect that must be given to patients with ACL sprain injuries. By providing measures ranging from prevention to recovery, it is expected that ACL sprain injury patients can recover as before the ACL sprain injury, both at the affected location and general physical fitness. Based on the description above, this study is to reveal the handling of sprain injury physiotherapy in PhysioSET Physiotherapy Clinic in Malang.

## 2. METHOD

The problem approach used in this research is to use a qualitative approach. The treatment is done through observation, interviews, and documentation. In accordance with the objectives of this study, the approach used is a qualitative descriptive approach to the type of research using survey methods. The subject of the research taken was the treatment of sprain injury physiotherapy at the PhysioSET Physiotherapy Clinic.

The research location is Ruko Ditas Kv. 28 Jalan M.T. Haryono No. 09 Dinoyo Subdistrict, Lowokwaru District, Malang City, in PhysioSET Physiotherapy Clinic. The reason for the research conducted at this location is that it is more easily accessible and close to a residence located in Malang. The type of research used is descriptive qualitative research. Source of data used are primary and secondary data about the sprain

injury physiotherapy survey at the PhysioSET Physiotherapy Clinic.

The primary data collection in this study was through interviews with the Head of Clinic and Physiotherapist at PhysioSET Physiotherapy Clinic. While secondary data obtained through documentation at the time of interview and observation.

Data collection must be done based on appropriate techniques to obtain truly relevant and useful data. The role of data in research is quite important. So the data collection techniques used in this study are by interview, observation, and documentation.

The interview method used was dialogue with brother Izzul as Head of the Clinic and physiotherapist in Physiotherapy in Malang. The observations made at the PhysioSET Physiotherapy Clinic are to see firsthand the spaciousness of the infrastructure and therapeutic modalities for ACL sprain injury patients. The documentation taken in this study is in the form of taking pictures during observations and interviews at the PhysioSET Physiotherapy Clinic.

Data analysis is an important step in research. To test the validity of the data obtained, the data analysis technique used in this study is the triangulation technique. The triangulation technique was carried out to reassert the practice carried out by the physiotherapist together with the basic theories of physiotherapy at the PhysioSET Physiotherapy Clinic. To obtain validity, researchers used deepening observation techniques by checking the suitability of the results of cases that actually occurred in the field.

## 3. RESULTS

After the researchers conducted research at the PhysioSET Physiotherapy Clinic in Malang with interview and documentation methods, the results of the study can be presented as follows:

Sprain injury patients who often come to PhysioSET Physiotherapy Clinic in Malang who have sprain injuries in the ACL (Anterior Cruciate Ligament) section. This was said by Izzul as head of the clinic and physiotherapist at the PhysioSET Physiotherapy Clinic in Malang City (June 17, 2019, 13.10) as follows:

For patients with sprain injuries who suffer the most sprain injuries at the PhysioSET Physiotherapy Clinic, they have an ACL injury to the knee joint.

The process of treatment for sprain injury patients in the PhysioSET Physiotherapy Clinic in Malang is using isometric techniques and with the help of tools. This was said by Izzul (17 June 2019, 13.15) as follows:

For the treatment process we must reduce the intensity of the pain first, then we also have to reduce the swelling using isometric techniques with the concept

of contraction. For tools using electrical tens for ten minutes with a frequency according to the tolerance of the patient. Next to ligament problems we provide stability and muscle strengthening exercises using an instrument called ultrasound to accelerate ligament stability. Furthermore, to overcome the pain we use infrared devices.

For treatment techniques in patients with sprain injuries at each level is not the same because it adjusts to the severity of the injury. This was said by Izzul (17 June 2019, 13.22) as follows:

Treatment techniques for sprain injury patients are certainly not the same, because each grade / level of injury is different. So the treatment is adjusted to the grade / level of injury experienced by the patient.

For the treatment of sprain injuries, tools used for therapy / therapeutic modalities such as electrical tens, ultrasound, and infrared. This was said by Izzul (17 June 2019, 13.29) as follows:

In addition to treatment with physiotherapy methods, we also use tools for treatment that are used for treatment. The tools we use are like electrical tens, ultrasound, and infrared. Like the electrical tens itself, its use is to reduce pain in sprain injuries, ultrasound to accelerate the stabilization process, and infrared itself is used to treat pain.



**Figure 1. Electrical tens tools**



**Figure 2. Ultrasound**

**4. DISCUSSION**

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The PhysioSET Physiotherapy Clinic was established aiming to help restore the function of human motion from human movement disorders from movement disorders or injuries. In its application the PhysioSET Physiotherapy Clinic is engaged in sports, namely in the process of mentoring and rehabilitation so that it can restore individual or team skills efficiently. Injured patients come to the clinic to get an assessment from the physiotherapist and recorded on a medical record sheet. In the medical record sheet, the record number is recorded consistently by month and the patient's serial number, the patient's personal data, complaints felt by the patient and the history of the injury and written diagnoses for the patient.

After getting an assessment from the physiotherapist from the physiotherapist, the patient will get treatment or action if the patient agrees with the assessment given by the physiotherapist. Actions (treatment) will be adjusted to the injury suffered by the patient. The action (treatment) includes several things, including treatment measures (curative) after the patient gets first aid, recovery, (rehabilitative) to prepare the patient's condition ready to exercise again. Efforts to improve the degree of health in sports physiotherapy can be done through promotive, preventive, curative and rehabilitative efforts.

Handling of physiotherapy at PhysioSET Physiotherapy Clinic for the treatment process until recovery does not use internal medicine. PhysioSET Physiotherapy Clinic in dealing with patients who

experience pain and swelling using ice compress techniques because the PhysioSET Physiotherapy Clinic uses pure physiotherapy techniques in its treatment.

The benefits of ice compresses include reducing blood flow to the injured area so as to reduce the risk of bleeding and edema, cold compresses caused analgesic effects by slowing down the speed of nerve delivery so that the pain impulses reaching the brain will be less [7].

The treatment process for ACL sprain injury patients at the PhysioSET Physiotherapy Clinic in Malang City is the first to relieve pain by using isometric techniques with the concept of contraction. For this treatment, physiotherapy is given using a tool called the electrical tens which serves to relieve pain in the affected part of the ACL sprain injury.

The mechanism of electrical tens tools is as follows: the mechanism of electrical tens tools is able to reduce pain by producing analgesia effects primarily through segmental mechanisms that refer to the gate control theory [8]. As for good ligament stability and muscle strengthening, the PhysioSET Physiotherapy Clinic uses an instrument called ultrasound that is useful for accelerating the stabilization of the ligament. Furthermore, the tool used by PhysioSET Physiotherapy Clinic to relieve pain is infrared. The function of the infrared device is as follows: One of the physiotherapy modalities that uses electromagnetic rays (infrared.). Aimed at increasing metabolism, vasodilation of blood vessels and reducing pain [9].

After the treatment process is complete, the recovery process is carried out to prepare the patient after the sprain injury is ready to return to the field. For the physiotherapist's recovery process the PhysioSET Physiotherapy Clinic uses several phases and collaborates with physical trainers. The phases are divided into four parts, namely phase one, phase two, phase three and phase four.

There are different treatments for each phase as follows: post-treatment rehabilitation has four phases which will have a direct effect on the patient's function and return to exercise [10]. In each of these phases there are different treatments given to patients after sprain injury. In phase one, two and three, patients after pure sprain injury received treatment from a physiotherapist, while in phase four patients received treatment from a physical trainer and collaborating with a physiotherapist.

The first phase of the exercise is to relieve pain, increase muscle strength, intervention is needed in the form of modality and exercise, including the use of electrical tens, muscle activation exercises in the form of standing leg lifts. The first phase has the following functions: Phase one, several inspection procedures can be performed including VAS (Visual Analogue Scale), edema measurement, ROM (Range of Motion), MMT

(Manual Muscle Testing), and functional status [10]. There are targets that must be achieved in this phase which include protection of healing tissue, decreased pain, decreased edema, ROM reaches  $0^{\circ}$  -  $0^{\circ}$  -  $110^{\circ}$ , increased muscle strength, weight bearing. Therefore, to be able to achieve the targets needed intervention in the form of capital.

## 5. CONCLUSION

Based on the results and discussion described above, handling of physiotherapy at PhysioSET Physiotherapy Clinic does not use in the form of drugs for the treatment process to the recovery process. To deal with patients who experience pain and swelling, the PhysioSET Physiotherapy Clinic only uses ice compresses. PhysioSET Physiotherapy Clinic uses tools for handling patients including electrical tens, ultrasound and infrared. Treatment of sprain injury physiotherapy at the PhysioSET Physiotherapy Clinic is to accelerate tissue repair, reduce pain and restore the function of the anterior cruciate ligament as well as stabilization exercises and muscle strengthening exercises around the injured area to strengthen the muscles so they do not experience re-injury. The recovery process at the PhysioSET Physiotherapy Clinic is carried out with four phases and by collaborating between physical trainer and physiotherapist for phase four. In this recovery process, patients with sprain injuries are given a program to be able to recover from their injuries and are ready to return to the field and PhysioSET Physiotherapist Clinic also provides preventive measures, with an appeal to keep doing exercises at home regularly.

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