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PHYSIOTHERAPY MANAGEMENT IN SPRAIN CASES DEXTRA ANKLE AT EFARINA HOSPITAL PEMATANGSIANTAR

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ABSTRACT

Sprain ankle area injuries to the joints, with ligament tears resulting from sudden excessive stress or repeated excessive use of the joints. In general, sprain due to falls, slips, or pressure on the body that causes bones in the joints to shift, causing impaired ankle stability. Ankle sprain occurs due to muscle weakness and ligament weakness by strengthening muscle training and increasing LGS using exercise therapy, and can help and improve muscle weakness caused by complex lateral ligament damage. The purpose of this thesis is to determine the effectiveness and exercise therapy in ankle sprain patients. In the case study, patients were found to have pain while standing on one foot on their right foot, and the patient felt uncomfortable when leaning on running because of pain that disturbed his balance. Physiotherapy interventions for patients were ultrasound and exercise therapy is given in stages over 3 days. After doing a gradual exercise program for 3 days. To obtain optimal therapeutic results, good collaboration between physiotherapy and sufferers is needed so that maximum results can be obtained. Independent exercise that is done regularly by the patient and is effective therapy to increase muscle strength and increase muscle flexibility.

Keywords: *sprain ankle dextra; physiotherapy*

INTRODUCTION

Health is a human right and one of the elements of welfare that must be realized in accordance with the ideals of the Indonesian nation as intended in the Pancasila and the 1945 Constitution of the Republic of Indonesia. One of the government's efforts to realize the optimal health status of the Indonesian people is to establish the vision and mission of the Indonesian Ministry of Health for 2010-2014. The increasing number of people who engage in recreational sports can push themselves beyond the limits of their physical

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condition and sports injuries occur. Injuries to the musculoskeletal system can be acute (sprains, or as a result of gradual overuse. Professional athletes are also susceptible to injury, even though their training is closely supervised to minimize the occurrence of injuries. However, often these athletes can also experience musculoskeletal injuries, one of which is sprains.

Ankle sprain is a pulling, stretching, or tearing of soft tissue, such as joint capsules, ligaments, tendons, or muscle. Term This Which often often used For referring to in a way special For Ligament injuries are graded as mild, moderate, or severe. If the sprain involves an inverted foot, the ligaments involved are the talofibular collateral ligament and the calcaneofibular ligament. Most people experience inverted foot sprains. Sprains involving eversion are less common. In this case, the medial collateral ligament (deltoid ligament) is sprained.

Ankle sprains can also occur during normal daily activities such as stepping over a curb or slip in on. Back to activities before ligament has fully healed so that Repeated stretching of the ligament may occur once it has fully healed, resulting in reduced stability in the wrist joint. legs. Repeated stretching will It causes increasing pain on the lateral side of the ankle, usually intermittent or sometimes constant, and tends to worsen with sports activities. This condition becomes a chronic ankle sprain.

LITERATURE REVIEW

Definition of Ankle Sprain

An ankle sprain is a joint injury involving pulling, stretching, or tearing of soft tissues such as the joint capsule, ligaments, tendons, and muscles. Specifically, the term is often used to refer to ligament injuries resulting from sudden overstretching or repetitive joint overuse. The severity of ligament injuries is generally classified into three degrees: mild, moderate, and severe.

Etiology and Mechanism of Injury

This injury is generally caused by a blunt or sharp object, a fall, a slip, or any other force that causes the bones in the joint to shift, disrupting ankle stability. There are two

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main mechanisms involved in ankle sprains.

Foot Inversion (Inward): This is the most common type of sprain. If the sprain occurs with foot inversion, the ligaments that are sprained (torn/pulled) are the talofibular collateral ligament and the calcaneofibular ligament on the lateral (outer) side. Foot Eversion (Outward): Sprains with foot eversion are less common. In this condition, the injured part is the medial ligament, namely the medial collateral ligament (deltoid ligament). Although often experienced by athletes or individuals who participate in recreational sports because they push their physical limits, ankle sprains are also common in normal everyday activities, such as stepping over a curb or slipping.

Pathophysiology and Chronic Ankle Sprain

Ligaments torn due to injury lose their stabilizing ability. If a person returns to activity before the ligaments have fully healed, they will be repeatedly stretched. Stability in the ankle joint will progressively decrease.

This repeated stretching triggers increasing pain on the lateral side of the ankle. The pain is usually intermittent or sometimes constant, and tends to worsen during exercise. This worsening condition leads to chronic ankle sprains.

Physiotherapy Management

Physiotherapy plays a crucial role in preventing disability and restoring physical and functional capacity in patients experiencing muscle weakness and ligament damage. The two main modalities used are ultrasound (US): This modality works by delivering heat and sound waves that penetrate deep into the tissue. The goal is to reduce pain (analgesic) and decrease muscle tension around the injured area.

Exercise Therapy: Muscle strengthening and flexibility exercises aim to address muscle weakness resulting from complex lateral ligament damage. According to Kisner's (1996) reference in the literature, the dose of exercise therapy can be given as many as 6 repetitions and adjusted to the patient's general condition; if possible, the exercise can be increased to 10 repetitions. Patient cooperation and discipline in performing the exercises independently are essential to achieve maximum recovery.

Physiotherapy Evaluation Parameters

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To measure the success of therapy and monitor physiotherapy problems, two main test parameters are used. Visual Analog Scale (VAS): Used to measure the level of pain reduction. This measurement includes three parameters, namely: pain on rest, pain on pressure, and pain on movement. Range of Motion (ROM): Used to measure the improvement in functional ankle joint movement ability, specifically in the dorso-plantar flexion and inversion-eversion planes.

METHOD

In the physiotherapist's assessment, process inspection to determine the problems patient starting with anamnesis, examination, and continuing with determining the physiotherapy diagnosis. Anamnesis. Examination Physical, Cognitive, Intrapersonal, Interpersonal, Problematics Physiotherapy, Program Plan Physiotherapy, Ultrasound.

1. Therapy Exercise

   According to Kisner (1996), the dose of exercise therapy used is 6 repetitions adjusted to the patient's general condition. If the patient's general condition is good, the exercise can be repeated up to 10 repetitions.

As for therapy exercise Which will given [10].

2. Action Physiotherapy
   a. Technology physiotherapy
      1) Ultrasound
      2) Therapy Exercise
   b. Education
      1) Ultrasound : give heat and sound waves that can reduce pain and muscle tension
      2) Therapy exercise : do exercise Which has in give, No do activities Which too heavy.
      3) Inspection painful with Visual Analog Scale (VAS)
      4) Inspection Range of Motion (ROM). [11]

RESULTS AND DISCUSSION

Results of Pain Examination with Visual Analog Scale (VAS)

The administration of Ultrasound and Exercise Therapy interventions showed a consistent

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trend of decreasing pain day by day:

Silent Pain: Decreased from a score of 3 (T1), to 2 (T2), and down to a score of 1 (T3).

Tenderness: Progressively decreased from a score of 6 (T1), to 5 (T2), and down to a score of 3 (T3).

Motion Pain: Experienced a significant decrease from a score of 8 (T1), to 7 (T2), and down to a score of 5 (T3).

Range of Motion (ROM) / LGS Examination Results

Therapy also has a positive impact on increasing the patient's range of joint motion, with the following details:

Dorso-Plantar Flexion: There is an increase in joint movement ability from Full ROM which was previously in the range of 15-30 degrees, increasing to 20-40 degrees approaching the normal range (30-50 degrees).

Inversion-Eversion: The joint movement ability which was previously at Full ROM 5-25 degrees, increases to 10-30 degrees approaching the normal range (15-35 degrees).

Inspection painful with VASE

Picture 1. Results inspection with VASE

Painful	T1	T2	T3
Painful silent	3	2	1
Painful press	6	5	3
Painful movement	8	7	5

Inspection ROM

Picture 2. Results inspection with ROM

Field movement	Normal ROM	Full ROM	P4
Dorso-plantar	30- 50	15- 30	20- 40

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flexion			
Inversion-eversion	15- 35	5- 25	10-30

From tables 1 and 2 it can be seen that the physiotherapy treatment that has been given shows an increase in muscle functional ability and a decrease in pain.

DISCUSSION

More and more people who take up recreational sports are pushing themselves beyond their limits. condition his physical And it happened injury sport. Injury to system mucoskeletal can nature acute (sprain, or as a result of gradual overuse. Professional athletes are also susceptible to injury, even though their training is closely supervised to minimize the occurrence of injury. However, these athletes can often also experience musculoskeletal injuries, one of which is a sprain. Ankle sprains are also can happened during activity normal daily life like step over the edge road or slip in Above. Returning to activity before the ligament has fully healed can result in repeated stretching of the ligament, which can lead to decreased stability of the ankle joint. Repeated stretching can cause increased pain on the lateral side of the ankle, which is usually intermittent or sometimes constant, and tends to be painful. increases with sports activities. This condition becomes a chronic ankle sprain.

Correlation between Physical Activity and Injury Risk

Today, more and more people are engaging in recreational sports and tend to push themselves beyond their physical limits, ultimately leading to sports injuries. These musculoskeletal injuries can be acute (such as sprains) or the result of gradual overuse. This risk isn't limited to the general public; even professional athletes, whose training is strictly supervised to minimize injuries, are still highly susceptible to musculoskeletal injuries such as sprains.

Mechanism of Injury in Daily Activities

Besides intense sports activities, ankle sprains can also occur during normal daily activities. Small mistakes, such as stepping incorrectly over a curb or slipping on a hard surface, can cause bone displacement in the joint and lead to ligament tears or strains.

The Dangers of Premature Activity and Chronic Ankle Sprain

A crucial point discussed is the patient's habit of frequently forcing themselves to return to full activity before the ligaments have completely healed. This is extremely dangerous because it results in repeated stretching of the ligaments, which are still structurally weak.

Decreases the level of stability of the ankle joint.

It causes complaints of constant or intermittent increasing pain in the lateral side of the ankle, especially when triggered by sports activities. This series of worsening conditions will ultimately lead to patients experiencing Chronic Ankle Sprain, where the injury becomes highly recurrent and difficult to heal without disciplined and ongoing physiotherapy intervention. Therefore, good collaboration between the physiotherapist and the patient's discipline in performing functional exercises at home is crucial for optimal recovery.

CONCLUSION

Patients with *right ankle sprain conditions* experience problems, namely pain and ligament structure injury. in around joints, consequence movement clamp or rotate (sprain). Sprain happen Because existence Impact from a blunt or sharp object that occurs on the ligament. The ligament will tear and the torn ligament will lose its stability.

Physiotherapist has a very useful role in preventing disability and for restore capacity physical and patient's functional abilities. For overcome problems such as pain, injury ligaments in around joints. Physiotherapy can give modality in the form of ultrasound And therapy exercise in where painful can be reduced.

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