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Physiotherapy

AN IMPACT OF MYOFASCIAL RELEASE TECHNIQUE ON MANAGEMENT OF PLANTER FASCIITIES

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ABSTRACT The purpose of this study was to find out the impact an of myofascial release technique on management of planter fasciities. To achieve the thirty (N=30) males with unilateral planter fasciitis were who is belongs from Annamalai Nagar, Tamilnadu, randomly assigned as subjects. The subjects were divided into 2 group of fifteen each.. Group-I patient treated with myofascial release technique and therapeutic ultrasound and group-II patient are treated with conventional with therapeutic ultrasound. The patients were treated with respective therapeutic methods with 15 minutes duration or 5 successive days for 3 weeks. Foot function test was assessed with the help of Foot Function Index(FFI). The pre and post test comparison of Foot Function Index is analyzed by paired 't' test. The entire statically analysis is carried out by statistical packages for social sciences(16th version). The results of the study showed the both the experimental groups are effective in relieving pain and improving functional activities. As per't' value the myofascial release technique and therapeutic ultrasound group is more significant in reducing pain and functional activities than conventional with therapeutic ultrasound group.

KEYWORDS : Myofascial Release Technique, Planter Fasciitis, Myofascial Release Technique and Therapeutic Ultrasound, Conventional with Therapeutic Ultrasound

INTRODUCTION

Myofascial release (MFR) therapy focuses on releasing muscular shortness and tightness. There are a number of conditions and symptoms that myofascial release therapy addresses. Many patients seek myofascial treatment after losing flexibility or function following an injury or if experiencing ongoing back, shoulder, hip, or virtually pain in any area containing soft tissue.

Myofascial release is an effective hands-on therapy which can directly change and improve health of the fascia. The purpose of Myofascial release is to break down scar tissue, relax the muscle and myofascia and restore good posture. Myofascial release technics focus on relaxing the deep tissue of the body providing lasting and effective relief to patient. Fascial entrapment patterns can appear when a body segment stops receiving appropriate stimuli, establishing a pathological process with deficient circulation and limitation in nutrient supply to the fundamental substance of connective tissue, with its consequent densification. Because dense tissue is hypomobile, this situation leads to movement limitations. Massage and releasing technics may provide a healing on pain and disability ***(Masi et al., 2010).***

Myofascial release therapy is a combination of manual traction and prolonged assisted stretching maneuvers designed to break up fascial adhesions. Myofascial release reduces the tension in muscles with secondary increased circulation, pain relief, and increased mobility by inducing segmental and suprasegmental reflex. Stimulation of the mechanoreceptors by Myofascial release may also close the “pain gate” via pre- and postsynaptic inhibition. Moreover, it has been found to induce release of endogenous opiates ***(Lemstra and Olszynski, 2005).***

Castro-Sánchez ,et al., (2011) found that Myofascial release therapy was effective in reducing muscle pain in FM. Since Myofascial release more directly targets the proposed peripheral pain generators residing in the fascia. With this in mind, we evaluated the benefits of Myofascial release on pain, and disease severity in patients with FM.

Plantar fasciitis is one of the most common causes of heel pain. It involves inflammation of a thick band of tissue that runs across the bottom of your foot and connects your heel bone to your toes (plantar fascia). Plantar fasciitis commonly causes stabbing pain that usually occurs with your first steps in the morning. As you get up and move more, the pain normally decreases, but it might return after long periods of standing or after rising from sitting. Plantar fasciitis is more common in runners. In addition, people who are overweight and those who wear shoes with inadequate support have an increased risk of plantar fasciitis.

Plantar fasciitis (PF) is the most commonly reported cause of inferior heel pain. It has been estimated that PF affects as much as 10% of the general population over the course of a lifetime. In fact, some authors have reported that PF accounts for between 8% and 15% of foot complaints in nonathletic and athletic populations. The incidence of PF peaks in people between the ages of 40 to 60 years with no bias towards either sex. There is evidence that this condition may not be characterized by inflammation but, rather, by non inflammatory degenerative changes in the plantar fascia ***(Goff and Crawford, 2011).***

MATERIAL AND METHODS

For this purpose thirty (N=30) males with unilateral planter fasciitis were who is belongs from Annamalai Nagar, Tamilnadu, randomly assigned as subjects. The subjects were divided into 2 group of fifteen each. Group-I patient treated with myofascial release technique and therapeutic ultrasound and group-II patient are treated with conventional with therapeutic ultrasound. The patients were treated with respective therapeutic methods with 15 minutes duration or 5 successive days for 3 weeks. Foot function test was assessed with the help of Foot Function Index (FFI). The pre and post test comparison of Foot Function is analyzed by paired 't' test. The entire statically analysis is carried out by statistical packages for social sciences (16^{th} version).

Analysis of the Data

Foot Function

The results of the dependent 't'-test on the data obtained for Foot Function of the subjects in the pre-test and post-test of the Experimental groups have been analyzed and presented in Table-1.

Table – 1 Summary Of Mean Standard Deviation And Dependent 't' Test For The Pre And Post Tests On Foot Function Of Experimental Groups (foot Function Index Is Expressed In Points)

Test	Descriptive Statistics	Myofascial Release Technique and Therapeutic Ultrasound Group	Conventional with Therapeutic Ultrasound Group
Pre Test	Mean	68.00	68.60
	SD (±)	4.37	4.91
Post Test	Mean	40.93	45.20
	SD (±)	7.84	8.47
“t” Test		11.68*	9.26*

** Significant at 0.05 level.*
The table value required for 0.05 level of significance with df 14 is 2.15.

Table-1 shows that the pre-test mean and standard deviation of Foot Function values of Myofascial Release Technique and Therapeutic Ultrasound group and Conventional with Therapeutic Ultrasound group are 68.00±.37 and 68.60±4.91 respectively. The post-test mean and standard deviation are 40.93±7.84 and 45.20±8.47 respectively. The obtained dependent t-ratio values between the pre and post test means on Foot Function Index of Myofascial Release Technique and Therapeutic Ultrasound group and Therapeutic Ultrasound group and Conventional with Therapeutic Ultrasound group are 11.68 and 9.26 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.15. It was concluded that Myofascial Release

Technique and Therapeutic Ultrasound group and Conventional with Therapeutic Ultrasound group had registered significant decrease in Foot Function performance.

The above data also reveal that Myofascial Release Technique and Therapeutic Ultrasound group had shown better decrease than Conventional with Therapeutic Ultrasound group in Foot Function.

The pre and post test mean values of Myofascial Release Technique and Therapeutic Ultrasound group and Conventional with Therapeutic Ultrasound group on Foot Function are graphically represented in the Figure -1.

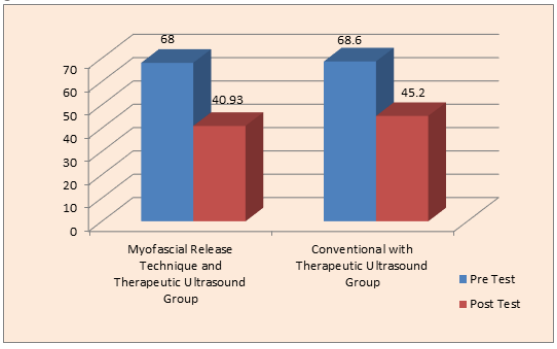

Figure: 1The Pre and Post test Mean Values of Myofascial Release Technique and Therapeutic Ultrasound group and Conventional with Therapeutic Ultrasound group on Foot Function (In Points)

CONCLUSION

The results of the study showed the both the experimental groups are effective in relieving pain and improving functional activities. As per 't' value the myofascial release technique and therapeutic ultrasound group is more significant in reducing pain in Foot and functional activities than conventional with therapeutic ultrasound group.

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