

A Research Study on Different Treatment Modalities for Plantar Fasciitis

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Abstract

Background: This study investigated the result of planter fascia stretch and heel pad with damp heat within the patients of planterfasciitis among subjects aged 20-40. Planter fascia may be a thickened fibrous sheet of animal tissue that begins from medial tubercle on face of bone and fans out connexion to the metatarsophalangeal joints plates to create longitudinal foot arch. Manual active stretching or passive stretching of planter fascia and Achilles's connective tissue square measure effective treatment choice for patient with planter fasciitis.

Aims and Objectives: Objectives of this study were to envision the result of planter fascia stretch and heel pad with damp heat within the patients of planterfasciitis.

Material and Methodology: This study was similar experimental study. It took samples by convenient methodology from eighty subjects among urban center personal hospitals community. The study was completed within the period of three months. knowledge was conducted through convenient sampling from urban center personal hospitals. This study explored the result of planter fascia stretch and heel pad with damp heat on subjects aging 20-40 years previous. Subjects were allotted to blood group (n=40) and B (n=40). Blood group received treatment as planter fascia stretch and B received treatment as heel pad with damp heat. Follow up were taken when four weeks in 3-month period study.

Results: Applied mathematics Analysis knowledge were analyzed victimization SPSS version 23.0. intramural comparison of variations between pre and post intervention immeasurable FFI and FADI was analyzed victimization freelance T check. The results were thought-about statistically important if p values were but zero.05.). No statistically important distinction was ascertained in pre intervention score between the teams on FADI (p = zero.211) and FFI (p = zero.365), but, statistically important distinction was ascertained between all the teams on post intervention score with reference to FADI (p=0.000) and FFI (p=.001) as analyzed by freelance t check.

Conclusion: When applying the whole treatments and measure pre and post worth it conducted that planter fascia stretch has a lot of important result on planterfasciitis than heel pad with damp heat.

Keywords: Planterfasciitis; Planter fascia stretch; Heel pad with damp heat

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Introduction

Planter fascia may be a thickened fibrous sheet of animal tissue that begins from medial tubercle on face of bone and fans out connexion to the metatarsophalangeal joints plates to create

longitudinal foot arch. Planter fasciitis may be a chronic syndrome of planter fascia thanks to perennial trauma as its origin on the bone. Planter fasciitis is incredibly important reason behind pain of heel on slightly inferior facet. Discomfort and pain

connected with condition will have goodly result on physical quality. Etiology of planter fasciitis is complex in nature. Increase in weight, anatomical changes improper foot wear, dangerous biomechanics, work connected problems and over activities square measure major contributive factors in developing the condition of planter fasciitis [1].

Sometimes it becomes severe and take month or perhaps year to resolve and become difficult for clinicians. alternative names for planter fasciitis embody calcimedlin, sub bone pain, runners' heel, heel spur syndrome and painful heel syndrome. shriveled gliding joint flexion, weight bearing for long amount, foot and sharp weight gain square measure the key risk factors for planter fasciitis. Signs and Symptoms square measure localized tenderness of bone at anteromedial side, stiffness of tendon of Achilles, pain exaggerated by passive flexion of toes when standing on tip of toes. important pain when acting serious activities or when weight bearing exercise. the precise presentation of planter fasciitis is pain on the only real foot at inferior border of heel. Patient feels severe pain when taken few steps in morning [2].

Most choices for treatment square measure obtainable that show completely different level of potency. Some conservatives' choices for treatment like rest, avoiding aggressive or serious activity, strengthening and stretching exercises, night splinting and orthotics. alternative choices to treat planter fasciitis square measure medicine agents, electrotherapy (Ultrasonic wave therapy), internal secretion injection and surgery. Time to resolve this issue varies from nearly half dozen to eighteen months. generally, is also longer which can become challenge for each patient and practicing. Several consultants assume identification, identification and treatment in early stage of illness brings higher recovery in relatively short amount of your time [3].

Splinting and walking casts facilitate the patient planter fasciitis to stay his foot in neutral position nightlong. It reduces the pressure on heel at heel strike. atomic number 14 innersole may be a non-invasive treatment choice that add comfort and supply soothing result to heal because it absorbs regarding five hundredth of shock throughout walking. Some studies suggest that atomic number 14 innersole give sensible relief to patient with planter fasciitis that the made-to-order orthotics and stretching exercises do alone and it's one in every of handiest treatment choices for increasing purposeful standing and decreasing pain in patient with planter fasciitis pain [4].

Manual active stretching or passive stretching of planter facia and herb connective tissue square measure effective treatment choice for patient with planter fasciitis. There square measure several studies are tested the potency of planter facia stretch and Achilles' connective tissue stretch with positive result. Some studies additionally evaluated the effectiveness of combined treatment as well as ultrasound or radial wave medical care and stretching exercises the results of an equivalent studies urged that combined treatment of stretching of skeletal muscle and ultrasound and planter facia being square measure as effective

as radial wave medical care and stretching of planter facia and skeletal muscle. Some studies showed the result for combined treatment of bone tape recording and planter facia stretch [5].

Stretching of calf muscle is additionally terribly effective in-patient planter facia in step with same studies. just some studies that recommend the superior of calf stretch over planter facia stretch or planter facia stretch over calf stretch. Some studies additionally compared the prevalence of planter stretch over stretch of connective tissue mythical being and also the result unconcealed the stretch of planter facia is comparatively more practical than connective tissue mythical being stretch in-patient planter facia. Combination of each stretch (planter facia stretch and calf stretch) square measure terribly effective in partitioning the difficulty, restoring the traditional vary of motion and decreasing the pressure from stiff and tight planter facia. however, there's no study has known the freelance potency of those exercises [6].

Some studies show that non-steroidal medicine in decreasing pain and reducing the inflammation of planter facia, however the potency of those medicine in patient with chronic issue still stay obscure. Some researches show the positive result with damp heat whereas treating patient with planter facia however the effectiveness of damp heat in isolation remains unsure. damp heat shows higher result once utilized in combination with alternative modalities like heel pad [7,8].

To our data, there'll be no literature of study that has compared and assess freelance potency of 2 ordinarily used treatment modalities like heel pad with hot fomentation and stretching exercises of planter facia. So, the target of recent study is to guage the response of planter fasciitis patient to completely different treatment choices once given singly that will support to ascertain a conclusive treatment strategy for managing patient with planter fasciitis [3,9].

Material and Methodology

This study was similar experimental study. It took samples by convenient methodology from eighty subjects among urban center personal hospitals community. The study was completed within the period of three months. knowledge was conducted through convenient sampling from urban center personal hospitals. It accustomed see the result of planter stretch and heel pad with damp heat within the patients of planter fasciitis. This study explored the result of planter facia stretch and heel pad with damp heat on subjects aging 20-40 years previous. Subjects were allotted to blood group (n=40) and B (n=40). blood group received treatment as planter facia stretch and B received treatment as heel pad with damp heat. Follow up were taken when four weeks in three months period study.

Inclusion criteria

- Both males and females aged 20-40.
- Moderate to severe intensity with minimum period of four weeks

Exclusion criteria

- History of steroid injections
- History of surgery in affected lower limb
- Any alternative pathology that may cause pain in heel patients having any psychological pathology

It was a quasi-experimental study during which eighty members of each genders square measure equally divided into 2 teams of blood group and B with forty, forty members during which blood group received treatment as heel pad with damp heat whereas B received treatment as planter facia stretch. A treatment given to each team for four days per week and complete session was of three months period. each treatment got underneath direction. Follow up was taken when four weeks of every month.

Statistical analysis

Statistical Analysis knowledge were analyzed victimization SPSS version twenty-three.0. intramural comparison of variations between pre and post intervention immeasurable FFI and FADI was analyzed victimization freelance T check. The results were thought-about statistically important if p values were but zero.05.

Results

Total eighty patients were enclosed in our study. forty were willy-nilly allotted to blood group and forty were allotted to B. Out of eighty patients 34(42%) were male and 46(58%) were feminine (Figure 1). Out of eighty patients eleven were exist age bracket of 20-25, seventeen were exist age bracket of 26-30, twenty-three were exist age bracket of 31-35 and twenty-nine were lies in age bracket of 36-40. Average age was thirty-two.61±3.94 (Figure 2). Out eighty patients fifty-seven were overweight and twenty-three weren't overweight. Average BMI was twenty-seven.32±4.82 (Figure 3). Important distinction was based on FADI score on each pair with p-value zero.000 (Table 1). important distinction was based on FFI score on each pair with p-value zero.000 (Table 2). No statistically important distinction was ascertained in pre intervention score between the teams on FADI (p = zero.211) and FFI (p = zero.365), but, statistically important distinction was ascertained between all the teams on post intervention score with reference to FADI (p=0.000) and FFI (p=.001) as analyzed by freelance t check.

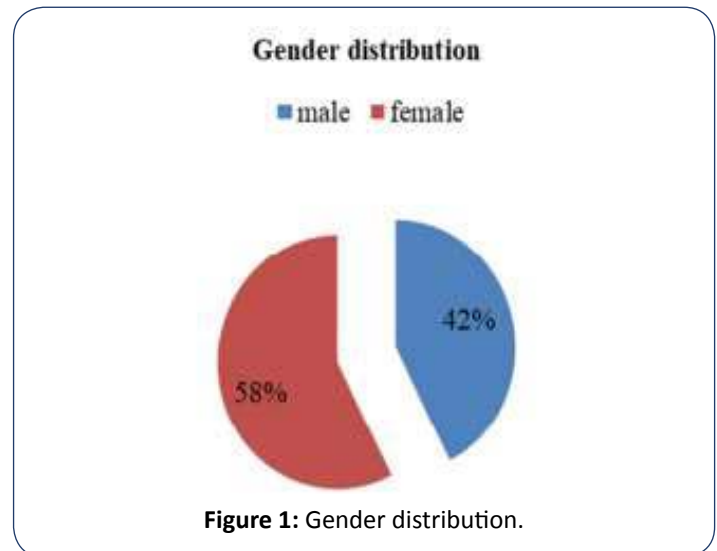


Figure 1: Gender distribution.

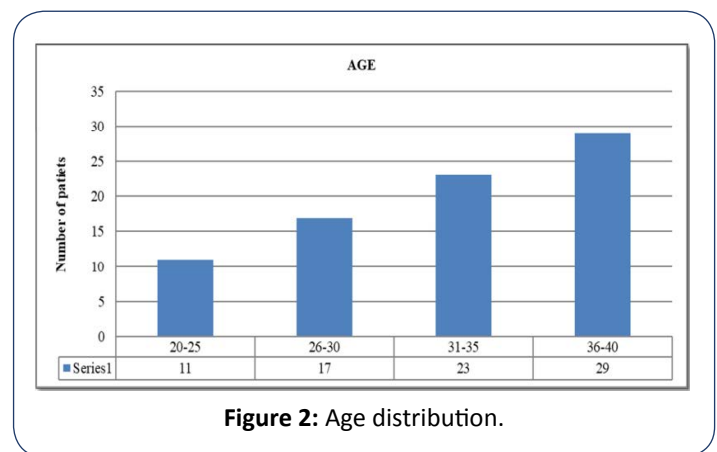


Figure 2: Age distribution.

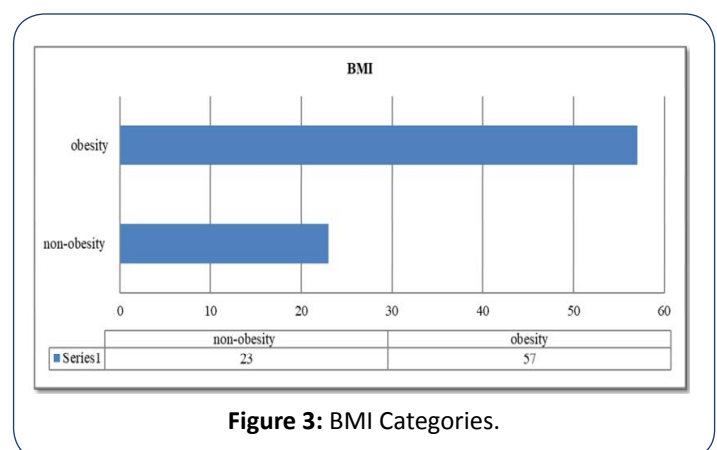


Figure 3: BMI Categories.

Group	Mean pre intervention score	Mean post intervention score	p-value
Paire-1	62.38	81.3	.000
Paire-2	66.20	90.63	.000

Table 1. FADI Score Comparison.

Group	Mean pre intervention score	Mean post intervention score	p-value
Paire-1	67.24	35.98	.001
Paire-2	69.89	13.11	.001

Table 2. FFI Score Comparison.

Independent T Test	P-Value
Pre-Intervention	0.211
Post-Intervention	0.000

Table 3. Independent t test on pre and post intervention FADI score of both groups.

Discussion

Plantar fasciitis may be an exhausting condition that causes pain on the inferior facet of the foot, significantly once taking the primary few steps within the morning [10]. Most choices for treatment are on the market that show completely different level of potency. Some conservative's choices for treatment like rest, avoiding aggressive or serious activity, strengthening and stretching exercises, night splinting and orthotics [2]. To our data, there'll be no literature of study that has compared and assess freelance potency of 2 normally used treatment modalities like heel pad with hot fomentation and stretching exercises of planter fascia. So, the target of recent study is to gauge the response of planter fasciitis patient to completely different treatment choices once given singly that will support to determine a conclusive treatment strategy for managing patient with planter fasciitis.

In our study total eighty patients were enclosed and haphazardly allotted to group A and B. Out of eighty patients 34(42%) were male and 46(58%) were feminine. within the gift study, we've got ascertained the predominance of feminine patients over the male patients. this can be in line with the study of Davis et al., seventy four feminine patients and thirty one male patients with area fasciitis were enclosed [2,11], and in another study by Yucel [12] heel pain was found to be a lot of common within the feminine population (76.6 p.c in females vs. 23.3 p.c in males. This inequality between male and feminine ratios in our sample could also be attributed to factors like long periods of standing, a lot of frequent use of overweight or high heel boots, and also the habit of barefoot walking among girls. Out of eighty patients, in our study ,11 was existing people of 20-25, seventeen were exist people of 26-30, twenty-three were exist people of 31-35 and twenty-nine were lies in people of 36-40. This shows that the prevalence of planter fasciitis will increase with the age. These results are in accordance with the study of Matheson. They found that younger athletes had a lower incidence of area fasciitis (2.5%) than older athletes (6.6%) during an exceedingly|in a very} retrospective study of 1407 patients from a patient medicine clinic.

Results of the current study depict that the area fascia stretching cluster showed a lot of reduction in pain and improvement in activities as compared to the siloxane heel pad and hot fomentation cluster as ascertained from mean distinction.

important distinction was supported on FADI score on each pair with p-value zero.000. important distinction was supported on FFI score on each pair with p-value zero.000. No statistically important distinction was ascertained in pre intervention score between the teams on FADI ($p = 0.211$) and FFI ($p = \text{zero}.365$), but, statistically important distinction was ascertained between all the teams on post intervention score with relevance FADI ($p=0.000$) and FFI ($p=.001$). Compared 3 ready-made shoe inserts (a rubber heel cup, a felt insert, and a siloxane heel pad) with Achilles' connective tissue and area fascia stretching against stretching alone on 236 patients during a randomized controlled study. Simply a hundred ninety patients completed the 8-week follow-up, however the siloxane insert cluster had a better response rate than the stretching-only cluster ($p=0.019$). though the siloxane insert cluster improved higher on FFI than the stretching alone cluster, there was no statistically important distinction ($p=0.54$). Another analysis by Yucel [12]. found that when mistreatment full-length insoles.

Conclusion

After applying the complete treatments and measurement pre and post worth it conducted that planter connective tissue stretch has additional important impact on planterfasciitis than heel pad with dampish heat.

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