

**Clinical Efficacy of *Korai Kizhangu Chooranam (Internal Medicine)* for the Management of *Kuthikaal Vaatham (Plantar Fasciitis)* – A Case Series**

K. Balagurusamy\*, J. Jothi\*\*, R. Vidhya\*\*\*, S. Balamurugan\*\*\*\*

\*Principal, \*\*Head of Department, \*\*\*Lecturer, \*\*\*\*Lecturer

Velumailu Siddha Medical College and Hospital Sriperumbudur

[dr.k.balagurusamy@gmail.com]

(Received:2April2022/Revised:15 April 2022/Accepted:29April2022/Published:1May2022)

**Abstract**

Plantar fasciitis (PF) is one of the commonest causes of heel pain reported in female adults, obese individuals and in young athletes. This condition accounts around 11-15% of the foot symptoms attended for professional opinion and management. In Siddha system “Plantar fasciitis” which can be Correlate with “*Kuthikaal Vaatham*”. Heel pains are more or less symptomatically correlated with the Siddha diagnostic terms *Kuthikaal Vatham (Pododynia)* and *Kuthikaal kuthu (Pternalgia)*.

**Prevalence:** Overall prevalence of diagnosed plantar fasciitis with pain was 0.85 percent. The prevalence of plantar fasciitis was lowest in those aged 18-44 (0.53 percent) and highest in those aged 45-64 (1.33 percent). Females (1.19 percent) were 2.5 times more likely to report plantar fasciitis than males (0.47 percent). **Incidence:** In Indian population, the incidence of such a finding in patients with heel pain is reported to be 59%. **Aim and Objective:** To study and Evaluate the Efficacy of *Korai Kizhangu Chooranam* for the management of *Kuthikaal Vatham*.

**Methodology:** 11 Female and 4 Male cases who reported with heel pain in an OPD at Velumailu Siddha Medical College and Hospital Sriperumbudur. **Outcome:** outcome will be assessed mainly by Pain scale. **Results:** Extend of range of movements and symptomatic relief of pain and swellings was well appreciated by the subjects after the treatment. **Conclusion:** The study results of *Korai Kizhangu Chooranam* showed effective pain management with other treatment modalities like(NSAIDs), orthotics, shockwave therapy, steroid injections and fasciotomy. This study shows simple medication with faster relief from heel pains particularly due to plantar fasciitis.

**Keywords:** Plantar fasciitis, *Kuthikaal Vatham*, *Korai Kizhangu Chooranam*, Pain management

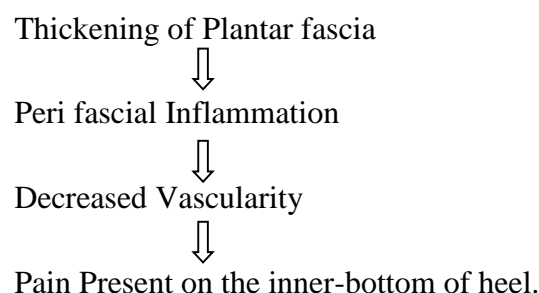
## 1.Introduction

Plantar fasciitis (PF) is one of the commonest causes of heel pain reported in female adults, obese individuals and in young athletes <sup>[1]</sup>.This condition accounts around 11-15% of the foot symptoms attended for professional opinion and management <sup>[2,3]</sup>.Plantar fasciitis (Pf) 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 each foot and connects the heel bone to the toes (plantar fascia).Plantar fasciitis commonly causes stabbing pain that usually occurs with your first steps in the morning. PF is found at almost every age in both sexes and in many occupations. The peak age of incidence in general population is between 40 and 60 years<sup>[4,5]</sup>. On progressing stage, there will be stiffness of Achilles tendon which is reported in 80 % of the subjects. The prevalence of plantar fasciitis was lowest in those aged 18-44 (0.53 percent) and highest in those aged 45-64 (1.33 percent).Females (1.19 percent) were 2.5 times more likely to report plantar fasciitis than males (0.47 percent).In Indian population, the incidence of such a finding in patients with heel pain is reported to be 59%.<sup>[6]</sup>. Histological analysis of the spur has revealed degeneration and proliferation of fibro cartilaginous tissue along with areas of ossification<sup>[7]</sup>.

Heel pains or Plantar fasciitis (Pf) is more or less symptomatically correlated with the Siddha diagnostic terms *Kuthikaal Vatham* (Pododynia) and *Kuthikaal kuthu* (Pternalgia).<sup>[8,9]</sup> *Kuthikal* denotes the heel of the foot and *Vatham* describes the disease of the heel that renders one to rest on the heel owing to excessive neuralgic pain. *Kuthikaal kuthu* is defined as the acute neuralgic pain of the heel region. *Kuthikaal isivu* is the chronic stage of this condition in which there will be spasm followed by stiffness of the adjacent muscle tendons resulting in reduced range of motion and limited dorsiflexion of the foot.

This study is aimed to evaluate efficacy of *Korai kizhangu chooranam* (Internal medicine) in the management of “*KuthikaalVatham*” patients. Patients were treated in the OPD of Velumailu Siddha Medical College and Hospital was included in this study based on the inclusion and exclusion criteria. The outcome of the study was assessed using universal pain scale.

### 1.1 Pathophysiology of Plantar Fasciitis



## 1.2 Aim

To Evaluate the efficacy of *KoraiKizhangu Chooranam* for the Pain management of *Kuthikaal Vatham*.

## 2. Materials and Methods

### 2.1 Internal Medicine:

*Korai Kizhangu (Cyperus Rotandus)*

### 2.2 Preparation of *Korai Kizhangu Chooranam*

*Korai kizhangu* was rinsed thoroughly with water and dried. Dried part of *Korai Kizhangu* was boiled with milk and dried in shadow, and then it is grinded into fine powder. Powdered drug were stored in dry air tight container.

### Dosage:

2-3 gms thrice a day for 48 days.

### Adjuvant:

Luke warm water

### Clinical Assessment

9 clinically diagnosed *Kuthikaal Vatham* patients were randomly selected in OPD of Velumailu Siddha Medical College and Hospital Sriperumbudur. During the treatment period studied drug of *Korai Kizhangu Choornam*<sup>[11]</sup> were given to that patients. Patients were asked to follow up 7 days once for 11/2 months (48 days).

**Table No 1:Basic selection criteria**

INCLUSION CRITERIA	EXCLUSION CRITERIA
<ul style="list-style-type: none"><li>➤ Age: 20 years to 65 years</li><li>➤ Sex: Males and Female</li><li>➤ Duration of occupation: Minimum 1 year</li><li>➤ Subjects with Plantar fasciitis for 3 weeks or longer</li></ul>	<ul style="list-style-type: none"><li>➤ Previous Surgery on foot</li><li>➤ Calcaneal Stress fracture</li><li>➤ Gout</li><li>➤ Ankylosing Spondylitis</li><li>➤ Rheumatoid Arthritis.</li><li>➤ Neurological disorders</li><li>➤ Paget's disease</li><li>➤ Pescavus</li><li>➤ Excessive foot pronation</li><li>➤ Reiter's Syndrome</li><li>➤ Psoriatic arthritis</li><li>➤ Presence of tight Achilles tendon</li></ul>

### 3. Results

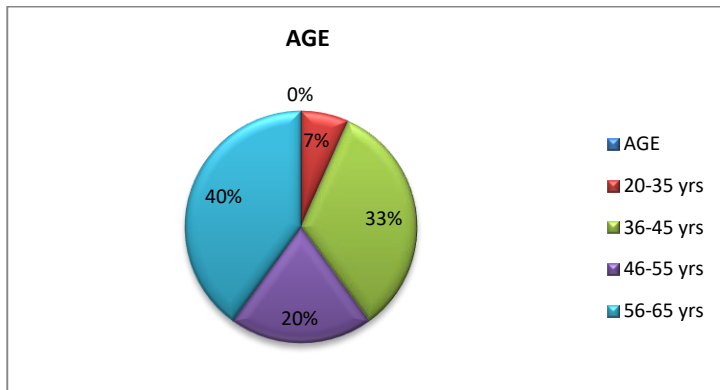


Fig No: 1 Affected Patients age group

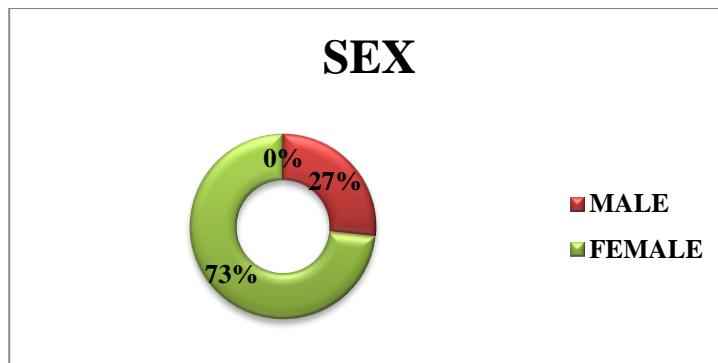


Fig No: 2 Ratio of affected Patients in each Sex group

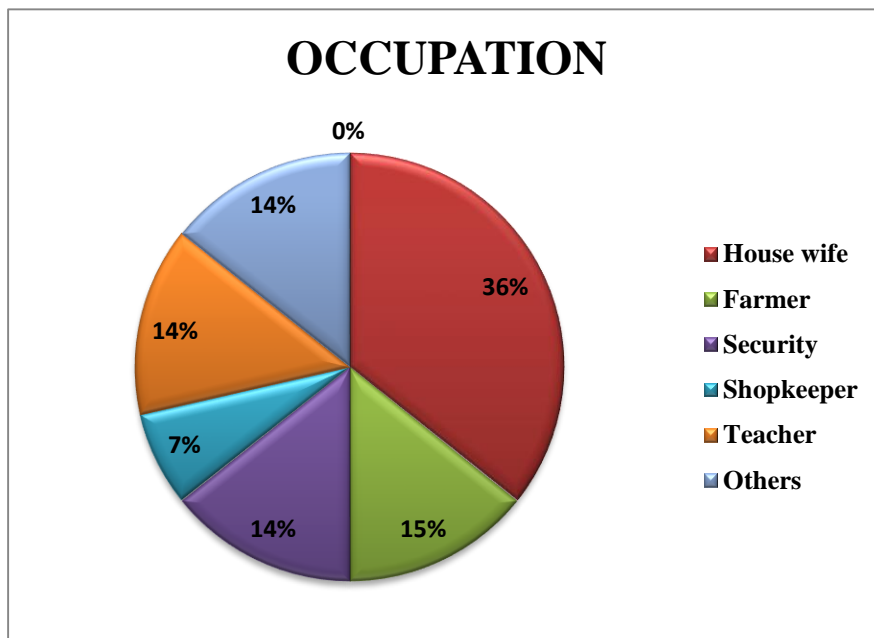
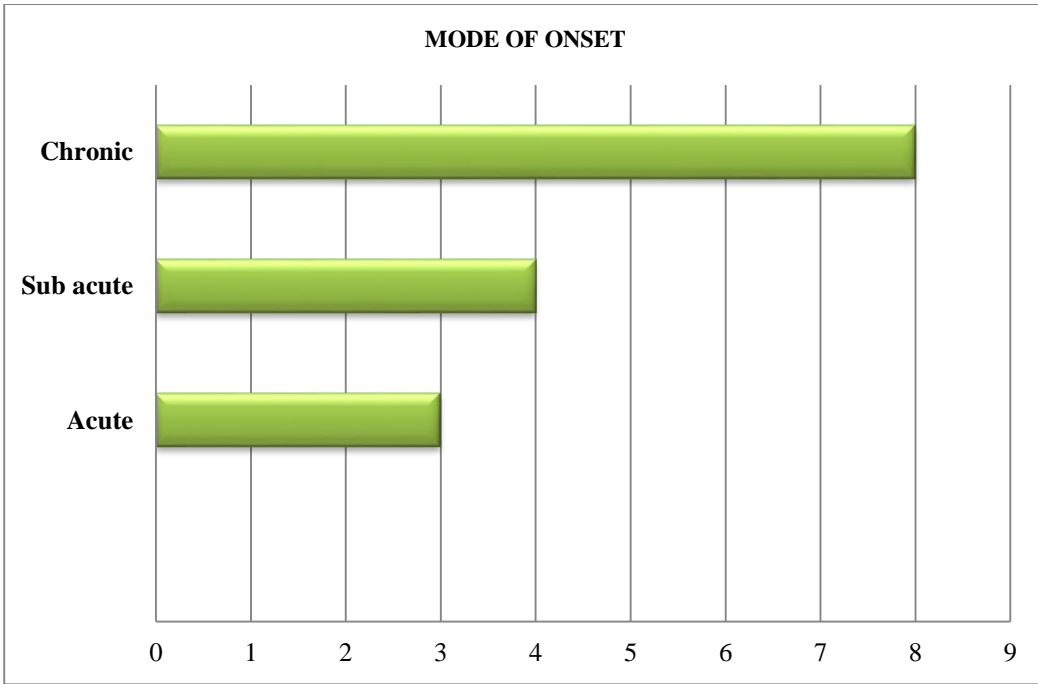
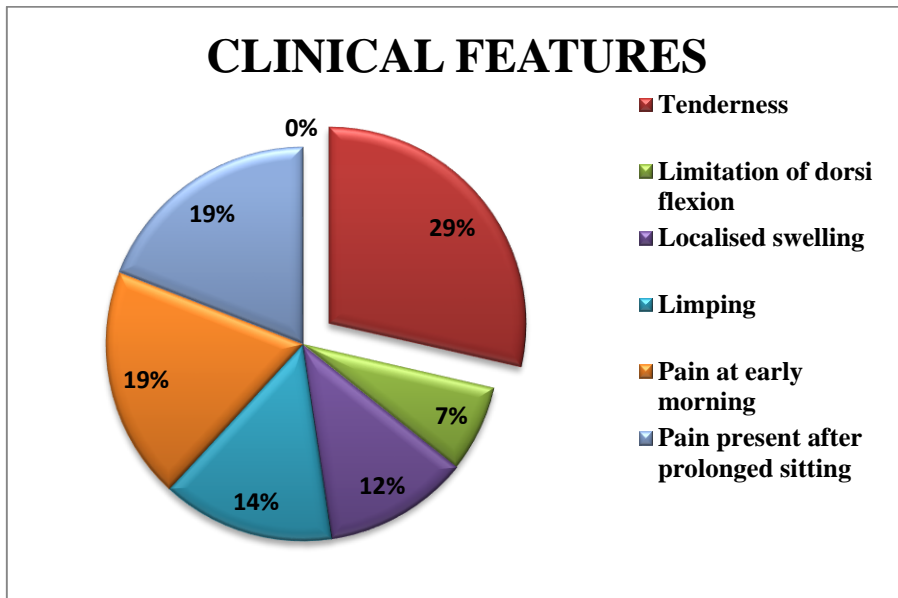


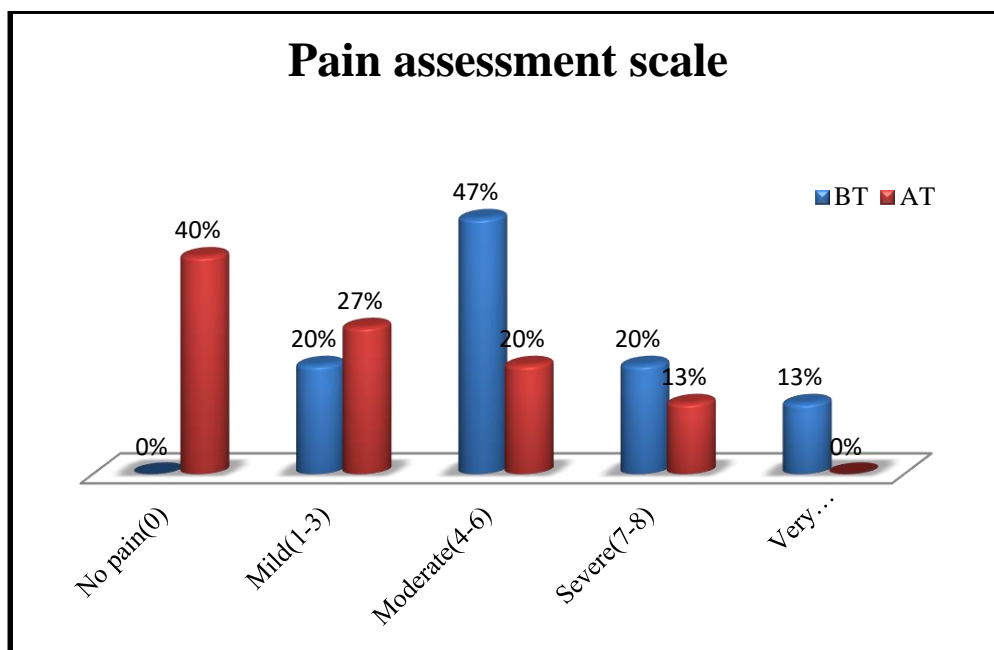
Fig No: 3 Percentage of affected Patients Occupation



**Fig No: 4 Mode of onset for affected Patients**



**Fig No: 5 Clinical features Percentage of affected Patients**

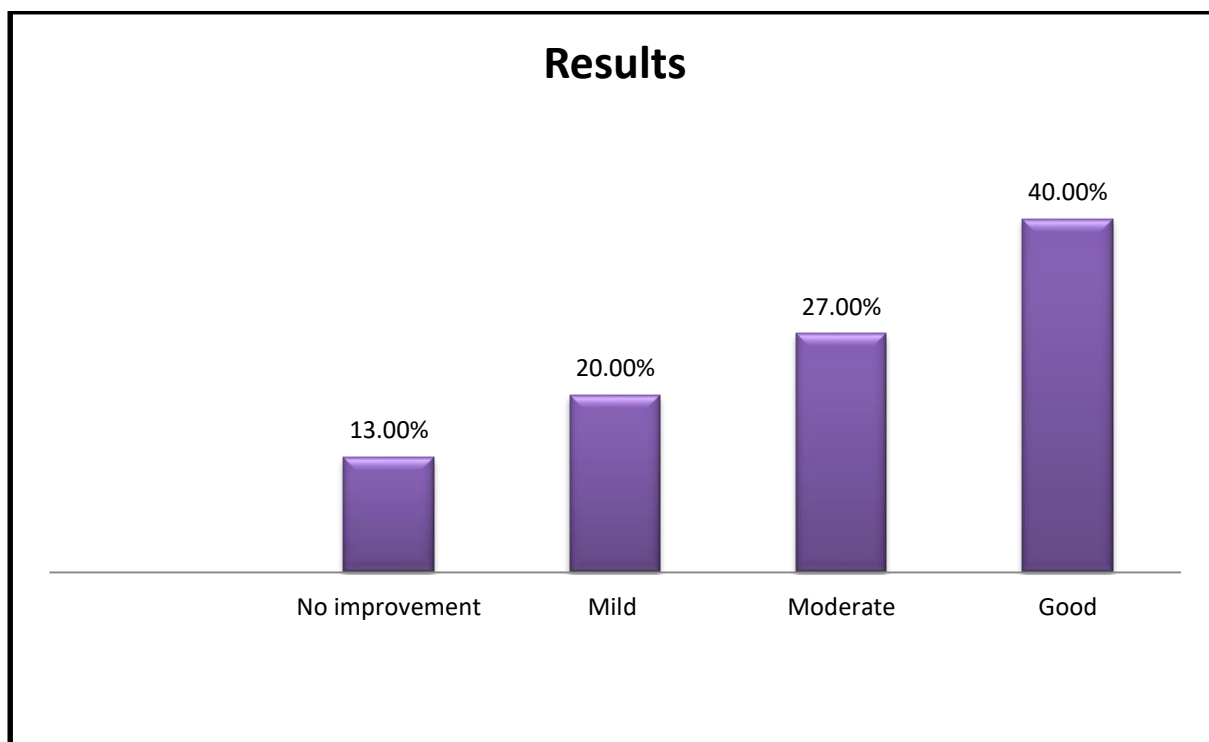


**Fig No: 6 Pain assessment scale for Before treatment and After treatment**

**Table No 2: Pain assessment scale of affected Patients before and after treatment**

Pain assessment	BEFORE TREATMENT		AFTER TREATMENT	
	Number of cases	Percentage	Number of cases	Percentage
No pain(0)	-	0%	6	40%
Mild(1-3)	3	20%	4	27%
Moderate(4-6)	7	47%	3	20%
Severe(7-8)	3	20%	2	13%
Worst(above 8)	2	13%	-	0%

Fig no: 7 Final Results



#### 4. Discussion

For this study, 15 patients were selected and patients were treated in the OPD of Velumailu Siddha Medical College and Hospital, Sriperumbudur. *Korai kizhangu chooranam* was given for 48 days. Patients were requested to visit the hospital once in 7 days. In each and every visit clinical assessment and prognosis were recorded.

Among the 15 patients, the diseases were found to be common in Female (73%) than Male (27%) and highest age distribution of *Kuthi Kaal Vatham* between the ages of 56-65 years (40%). Household work (36%) and Farmers (15%) and Securities, Teachers and Others (14%) accounts for the highest number of cases. 53% of cases were reported chronic onset, 26.6% of cases were reported with sub-acute onset, 20% of cases reported with acute onset.

Among 15 patients 29% of cases with the symptoms of tenderness, 19% of cases with the symptoms of Pain at early morning and Pain present after prolonged sitting. 14% of cases with the symptoms of limping, 12% of cases with the symptoms of localised swelling, 7% of cases with the symptoms of limitation of dorsi flexion.

According to Pain assessment scale, **Before treatment** 47% of patients were score between (4-6) and 20% of patients were score between (1-3) and (7-8) remaining 13% of patients scored above 8. **After treatment** 40% of patients were score (0), 27% of patients were scored (1-3). 20% of patients scored (4-6) 13% of patients persist (7-8).

The outcome of this study was clinically observed by **Pain Assessment Scale** which showed encouraging results of good improvement in 6 patients (40%), Moderate improvement in 4 patients (27%), Mild improvement 3 patients (20%) and Poor improvement in 2 (13%) cases.

## 5. Conclusion

As a conclusion Siddha herbal preparation *Korai Kizhangu Chooranam* (*Internal medicine*) having good results in reducing clinical symptoms of *Kuthikaal Vaatham* (Plantar fasciitis) such as pain present in heel, Pain in prolonged sitting and after standing in a short duration. Hence the study results show *Korai Kizhangu Chooranam* effective in the pain management of *Kuthikaal Vaatham* (Plantar fasciitis) than other treatment modalities such as interferential therapy, steroidal injection, fasciotomy.

## 6. References

1. Mohammad Ali Tahririan, Mehdi Motififard, Mohammad Naghi Tahmasebi, Babak Siavashi. Plantar fasciitis. *J Res Med Sci.* 2012; 17(8): 799–804.
2. Liden B, Simmons M, Landsman AS. A retrospective analysis of 22 patients treated with percutaneous radiofrequency nerve ablation for prolonged moderate to severe heel pain associated with plantar fasciitis. *J Foot Ankle Surg.* 2009; 48(6):642-7.
3. Cole C, Seto C, Gazewood J. Plantar fasciitis: evidence-based review of diagnosis and therapy. *Am Fam Physician.* 2005; 72(11):2237-42.
4. Chakraborty MK, Onta PR, Sathian B. Efficacy of Stretching Exercises in the treatment of Chronic Plantar Fasciitis- A Prospective study. *Asian Journal of Medical Sciences* (2011); 2: 97-101.
5. Mario Roxas, ND. Plantar Fasciitis: Diagnosis and Therapeutic Considerations. *Alternative Medicine Review.* (2005); 10(2): 83-93.
6. Lourdes RK, Ram GG. Incidence of calcaneal spur in Indian population with heel pain. *Int J Res Orthop* 2016;2:174-6
7. Kirkpatrick J, Yassaie O, Mirjalili SA. The plantar calcaneal spur: a review of anatomy, histology, etiology and key associations. *J Anat* 2017;230:743-51
8. TV. Sambasivam Pillai. Tamil- English Dictionary of medicine, chemistry, botany and allied sciences Volume 2. Madras: The research institute of Siddhars science. 1931.
9. S. Vinayak, B.S. Vindhya, R. Gayatri, Management of heel pain through quantified solar therapy [QST] in Traditional Siddha medicine: Two case reports
10. Mr. K.S. Murugesu Muthaliyar Gunapaadam- Mooligai Vaguppu (1st part), 2nd edition (2008), Published by Indian medicine and homeopathy department.
11. Agathiyar Gunavagadam, Published by Indian Medicine and Homeopathy Department.



12. Dr.R.Thiyagaran "Siddha Maruthuvam Sirappu", 3rd edition (2008), published by commissionerate of Indian medicine and Homeopathy, Chennai.
13. DheerajLamba, Mukesh Tiwari To Study the Characteristics and Efficacy of 820 Nm GA-Al-As diode Laser for The Treatment of Plantar Fasciitis among Porters/Coolies In Kumaun Region, India: A Randomized Clinical Trial