

THE CLINICAL STUDY OF THE EFFICACY OF VIDDHAGNI KARMA IN THE PAIN MANAGEMENT OF CALCANEAL SPUR

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ABSTRACT

The modern lifestyle demands being active on our feet for long hours causing pain in the heels of the feet. The predominant cause of foot pain is Calcaneal spur which according to Ayurveda is due to Asthisnayugata dushti by vitiated Vata dosha. Calcaneal spur is an osteophyte growth on the calcaneus (the heel bone), caused due to deposition of calcium on its underside over a long duration and triggered by repeated strain on the foot causing stretching of the plantar fascia and tearing of the membrane over heel. The modern treatment for this is NSAID's, steroidal injections, exercise or long duration of analgesics wherein finally excision of spur is advised. The conservative treatment as well as surgery has complications like

incomplete pain relief or nerve damage. In the holistic science of Ayurveda, Aushadh-Shastra-Kshar-Agnikarma is protocol to treat ailments and Agnikarma is glorified as the treatment when the former three fail. In Calcaneal spur, Agnikarma not just mitigates pain but also underlying inflammation. Viddha karma is one of the eight Shashtrakarma mentioned by Acharya Sushruta and consists of a sterile procedure wherein hollow needles are pierced at specific points on the body to provide pain relief by releasing endorphins. The combination of Agni and Viddha karma administered to 15 patients for 5 sittings, a 7 day interval between each, over the duration of 35 days and follow up of 2 months for recurrence. Visual Analog Scale was used to get subjective assessment of pain relief after each sitting and upto 70 percent pain relief was recorded concluding significant pain relief in calcaneal spur by Vidhagni karma cementing it as an effective Ayurveda treatment modality without any side effects.

KEYWORDS: Calcaneal spur, Asthisnayugata Vata dushti, Vatakantaka, Viddha-agni karma, VAS scale.

INTRODUCTION

The modern lifestyle demands being on our feet for long hours resulting in pain in the heels of the feet. The predominant cause of this pain is Calcaneal spur which in Ayurveda is caused due to Asthisnayugata dushti by vitiated Vata dosha.

Calcaneal spur is an osteophyte growth on the calcaneus (heel bone), caused due to deposition of calcium on its underside over a long duration, triggered by repeated strain on the foot causing stretching of plantar fascia and tearing of the membrane over the heel. The spur is due to the result of the biomechanical fault and associated with a painful plantar heel. The most common aetiology is thought to be abnormal pronation resulting in increased tension forces within the structures that attach in the region of the calcaneal tuberosity.

The clinical features of heel pain can be correlated with 'Vatkantak' referred in 'Vatvyadhi' context in the classical text.^[1]

Modern management^[2] for treating the heel-pain includes oral non-steroidal anti-inflammatory drugs, extensive bed rest, insole rubber heel cup-pads, radiant heat or diathermy^[3], injection of hydrocortisone acetate and lignocaine into the tender area. In chronic cases, surgical procedures include release of planter fascia from tuberosity of the calcaneus, removal of any calcaneal spur, neurolysis of the nerve to the abductor digiti minimi, release of the flexor digitorum brevis, and excision of the anterior tuberosity of the calcaneus.^[4,5] The conservative treatment as well as surgery has complications like incomplete pain relief or nerve damage.

In the holistic science of Ayurveda, Aushadh-Shastra-Kshar-agnikarma is treatment protocol for ailments. In Sanhita's it is mentioned that the diseases which are not cured by the former three methods are cured by Agnikarma.^[6] Agnikarma has been described as the most effective therapy in the management of all painful conditions especially for musculo-skeletal disorders. Viddha karma is one of the eight Shashtrakarma mentioned by Acharya Sushruta.^[7] wherein in a sterile procedure hollow needles are pierced at specific points on the body for pain relief by releasing endorphins.

The Experimental amalgamation of these two procedures has provided rapid relief in the pain caused due to calcaneal spur in this study.

This leads to a conclusion of significant pain relief in calcaneal spur by Vidhagni karma cementing it as an effective treatment modality of ayurveda without any lethal side effects.

AIM OF STUDY

-To assess the efficacy of Viddhagni Karma in Pain Management in Calcaneal spur.

OBJECTIVES

-To study available literature and latest research done in viddhagni karma.

-To analyze the mechanism of action of viddhagni karma in pain relief of Calcaneal spur.

MATERIAL AND METHODS

Selection of patients

An open clinical non-comparative trial was conducted at Viddhagni O.P.D of R.A Podar ayurveda college, Worli, Mumbai.

A total of 15 patients were included in the study. Both male and female patients of Calcaneal spur were randomly selected with different pain scale intensity.

Inclusion criteria

i. Calcaneus spur

Exclusion criteria:

i. Local infection / Osteoporosis

ii. Sarcoma / any other type of tumour pressing on tendon

iii. Corn / Tropical ulcer

iv. Fracture of calcaneus / ankle joint bone/Treatment of foot or leg fractures by metal plating or screws etc

v. Foreign body in heel

vi. Blood disorders

vii. Cardiac pacemakers

viii. Blood thinners.

Plan of study and treatment

- Proforma compiled with detailed clinical history and physical exam of the patients.
- X-rays of the heel were observed manually for all patients.
- After confirming the diagnosis 15 patients were given the following treatment

METHOD

The Viddhagni Karma treatment was carried out by thoroughly cleaning heel area with spirit using cotton swab. Placement of patient plate/ earthing plate under thigh before commencing of procedure is important. Then using needles (depending on area of pain and specific points of maximum tenderness) of 26G and 1 1/2 inch. The needle was pierced about 0.5 cm through the skin of the heel at points of maximum tenderness demarcated beforehand.

Using a Monopolar cautery machine a minimum setting of 0.50 mHZ and maximum of 2mHZ is administered to each needle shaft for 2-5 seconds, depending upon the capacity and pain threshold exhibited by the patient. This cycle is repeated 2 more times after a 2-5 minutes interval depending upon the capacity of individual patients.

The process is repeated again with piercing needle at other sites on the heel if patient complains of complete heel pain rather than at points of maximum tenderness. It is to be noted that after needle piercing if blood comes through the needle then viddhagni karma should not be performed at the site and needle is to be removed and applied to another site. After completing the necessary cycles patient is asked to rest his/her foot, thorough cleaning of site is performed again.

Viddhagni karma was administered to 15 patients for 5 sittings, with a 7 day interval in-between each, over the duration of 35 days and follow up for the next 2 months for recurrence.

CRITERIA FOR ASSESSMENT

Visual Analog Scale was used to get an assessment of pain relief after each sitting. VISUAL ANALOG SCALE are rated as

0-----1----- 2----- 3----- 4----- 5----- 6----- 7----- 8----- 9----- 10

0 - No pain, 1-3: Mild pain, 4-7: Moderate pain, 8-10: Severe pain

OBSERVATION, RESULTS AND DISCUSSION

Most of the patients (53.33%) belonged to the 20 – 50 years age group [Table 1]. In this study 60% of them were males and 40% were females [Table 2].

Out of 15 patients 10 patients (66.67%) had complete relief of pain after 5 weeks of Viddhagnikarma treatment, 3 patients (20%) had only mild pain, 2 patients (13.34%) had moderate pain, [Table 3].

Only 2 patients had recurrent pain after 2 months on follow up.

During study it was found that over the period of 5 weeks the electrical frequency of the cauterly needed to be increased gradually each week due to increased pain threshold capacity of individual patients.

Viddhagni karma blocks pain by activating a variety of bioactive chemicals through peripheral, spinal, and supraspinal mechanisms.^[8]

These include opioids, which desensitize peripheral nociceptors and reduce pro-inflammatory cytokines peripherally and in the spinal cord, and serotonin and norepinephrine, which decrease spinal n-methyl-d-aspartate receptor subunit GluN1 phosphorylation to inhibit pain.

Table 1: Age Distribution.

| Age | No. of Patients | Percentage |
|-------------|-----------------|------------|
| <20 yrs | 3 | 20 |
| 21 – 50 yrs | 8 | 53.33 |
| >51 yrs | 4 | 26.67 |

Table 2: Gender Distribution.

| Gender | No. of Patients | Percentage |
|--------|-----------------|------------|
| Male | 9 | 60 |
| Female | 6 | 40 |

Table 3: Pain Score according to VAS scale before Treatment.

| Score | Interpretation | FREQUENCY | PERCENTAGE |
|-------|----------------|-----------|------------|
| 0 | No pain | 0 | 0 |
| 1-3 | Mild pain | 4 | 26.67 |
| 4-7 | Moderate pain | 7 | 46.67 |
| 8-10 | Severe pain | 4 | 26.67 |

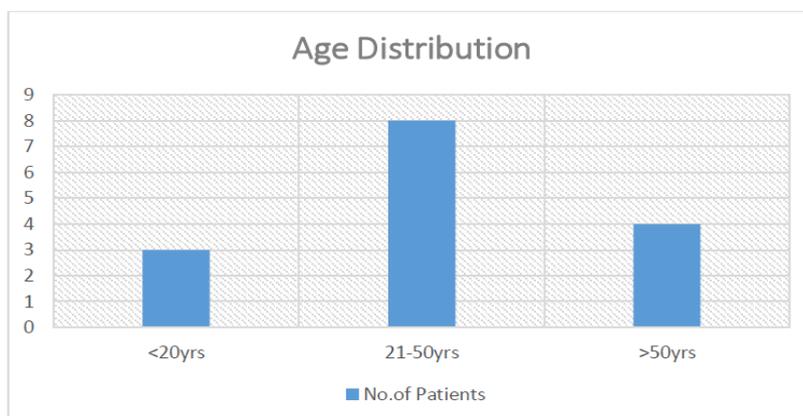
Table 3: Pain Score according to VAS scale After Treatment for 5 weeks.

| Score | Interpretation | FREQUENCY | PERCENTAGE |
|-------|----------------|-----------|------------|
| 0 | No pain | 10 | 66.67 |
| 1-3 | Mild pain | 3 | 20 |
| 4-7 | Moderate pain | 2 | 13.34 |
| 8-10 | Severe pain | 0 | 0 |

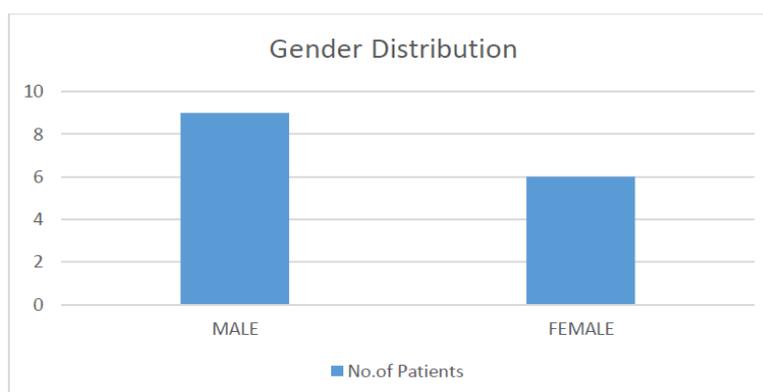
STATISTICS

WILCOXON SIGNED RANK TEST

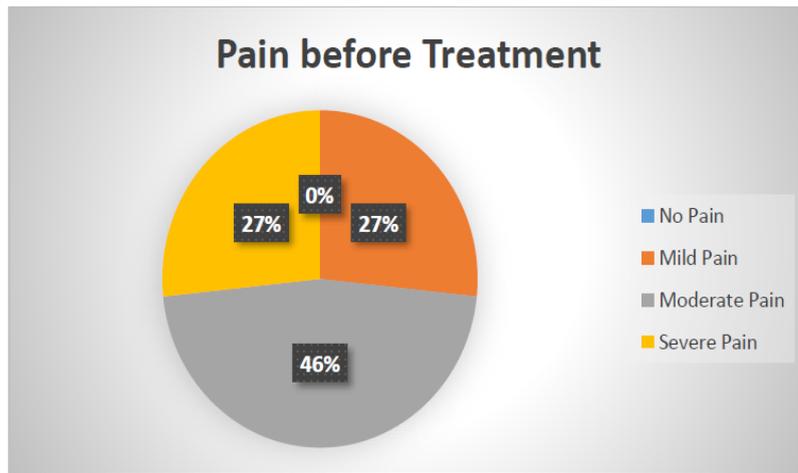
| | | |
|----------------------------|----------|---------|
| Theoretical median: | 0.000: | 0.000: |
| Actual median: | 6.000: | 0.000: |
| Number of values: | 15: | 15: |
| Sum of signed ranks (W): | 120.0: | 21.00: |
| Sum of positive ranks: | 120.0: | 21.00: |
| Sum of negative ranks: | 0.000: | 0.000: |
| P value (two tailed): | <0.0001: | 0.0313: |
| Exact or estimate?: | Exact: | Exact: |
| P value summary: | ****: | *: |
| Significant (alpha=0.05)?: | Yes: | Yes: |



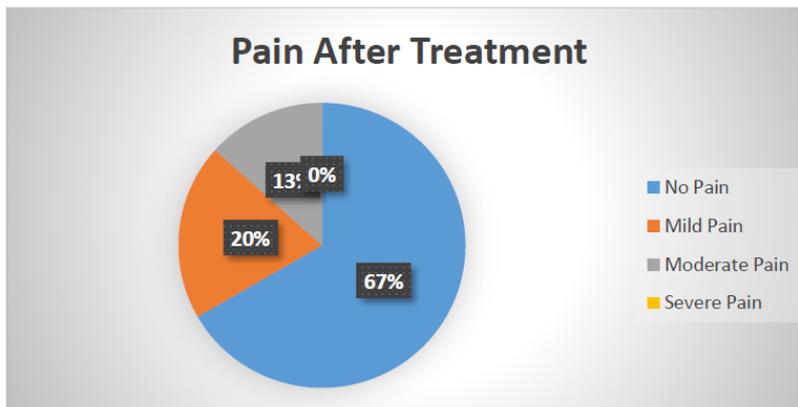
Graph 1.



Graph 2.

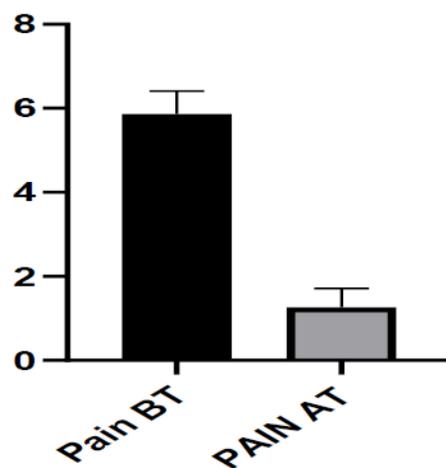


Graph 3.



Graph 4.

Data 1



Graph 5.

CONCLUSION

On the basis of the clinical observation and discussion, it may be concluded that there is significant result of Viddhagni karma in the treatment of Calcaneal spur and gives relief in pain and other symptoms of this condition. On the basis of this study it can be concluded that the trial treatment therapy i.e. Viddhagni Karma can be used as a way of treatment in the pain management of patients of Calcaneal spur who are trying to get treated by modern ways without effect. There was no adverse treatment reaction seen during the period of trial and it is a safe, convenient and effective measure for the treatment of patients suffering from Calcaneal spur that can be performed by health professionals on OPD basis.

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