

A Comparative Clinical Study to Evaluate the Efficacy of Ishtika Sweda and Upanaha Sweda in the Management of Vatakantaka with Special Reference to Plantar Fasciitis

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ABSTRACT

Vatakantaka is a Vata-predominant disorder described in Ayurveda, is clinically comparable to Plantar Fasciitis, common musculoskeletal condition characterized by heel pain, tenderness and morning stiffness resulting from inflammation of the plantar fascia. The condition adversely affects mobility and quality of life. Among Ayurvedic treatment modalities, Swedana therapy is considered effective in alleviating pain and stiffness by pacifying aggravated Vata and improving local circulation.

Keywords: Vatakantaka, Plantar Fasciitis, Swedana, Ayurveda

INTRODUCTION

Ayurveda aims to preserve health, prevent disease and restore well-being through a holistic approach that emphasizes maintaining equilibrium of Dosha, Agni, Dhatu and Mala. Among the three Doshas, Vata governs all bodily movements and its vitiation is considered the primary cause of several musculoskeletal disorders^[1]. Vatakantaka is a Vataja Nanatmaja Vyadhi^[2] characterized by severe heel pain due to the localization of aggravated Vata^[3] in Khuda Pradesha affecting Snayu and Sandhi. Classical texts occurrence following improper placement of the foot, excessive walking, use of unsuitable footwear and intake of Ruksha, Sheeta and Laghu ahara.

Clinically Vatakantaka presents with sharp, thorn like pain the heel, interfering with routine activities. Based on its clinical features, it closely resembles Plantar Fasciitis, one of the most common cause of heel pain, affecting nearly 17-24% of adults and up to 42% of individuals over 65 years of age^[4]. Plantar fasciitis is characterized by pain at the plantar aspect of the heel, particularly during the first steps after prolonged rest, which gradually subsides with continued walking. Conventional management includes physiotherapy, stretching exercise, orthotic supports, non-steroidal anti-inflammatory drugs, corticosteroid injections and

surgical intervention in resistant cases. However, these measures mainly provide symptomatic relief and do not adequately prevent recurrence.

Ayurveda classics recommend Snehana, Swedana, Upanaha, Agnikarma, Bandana and Unmardana^[5-8] for the management of Vatakantaka. Among these Upanaha Sweda provides sustained therapeutic warmth, enhances local drug absorption relieves pain, stiffness and improves joint mobility. Ishtika sweda a form of Ruksha Sweda using heated bricks is traditionally indicated in Vata-Kapha predominant disorders for reducing pain, stiffness and obstruction while improving circulation.

MATERIALS AND METHODS:

Source of Data: The patients attending the Panchakarma OPD and IPD of Dhanvantari Ayurveda College, Hospital and Research Centre, Siddapur with the complaints of Shoola, Toda, Sthamba and Shotha in Gulfa. Out of these, 40 patients of Vatakantaka, who fulfilled the below mentioned inclusion criteria were selected for the study.

Inclusion Criteria:

1. Patients with either sex between the age group of 40-60 years being diagnosed as Vatakantaka.
2. Patients suffering from Vatakantaka having classical signs and symptoms
 - Gulpha Shoola
 - Gulpha Toda
 - Gulpha Sthamba
 - Gulpha Shotha
3. Patient fit for Ishtika Sweda
4. Patient fit for Upanaha Sweda

Exclusion Criteria:

1. Patients with skin diseases, open lesions on ankle and infection.
2. Patients with impaired skin sensation like hypoesthesia, hyperesthesia.
3. Patients with any other systemic disorders which may interfere with the course of treatment will be excluded.

Study design:

The present study is a OPEN LABEL, RANDOMIZED, COMPARATIVE CLINICAL STUDY.

A minimum of 40 patients fulfilling the inclusion criteria and exclusion criteria of Vatakantaka will be selected and equally divided into two groups i.e; 20 patients in each group for the study irrespective of gender, religion, occupation and economic status.

Group A: 20 patients will be subjected to Ishtika Sweda with Kanji Group B: 20 patients will be subjected to Upanaha Sweda with Koladi

Duration of treatment: Group A for 7 days, Group B for 7 days

Treatment Schedule:

Group A: Ishtika sweda, Group B: Upanaha Sweda

Group A: Ishtika sweda Purvakarma :

1. *Sambhara sangraha:*
 - *Ishtika* : 2
 - *Kanji* : 2 litre

- Vessel : 1
 - Glass : 1
 - Cloth
2. Patient preparation :
- Patient is made to sit comfortably.
 - At the beginning of procedure *Svastivachana mantra* will be chanted.
 - Patient will be advised to keep his/her body relaxed and concentrate on the procedure.
 - *Abhyanga* is performed with *Tila taila* (10ml) and performed for 5 minutes.

Pradhana Karma:

- *Ishtika* (brick) is heated until it becomes red hot then the *Kanji* is poured over *Ishtika*.
- The *bhaspa* emitted by pouring the *kanji* on *Ishtika* is directed towards the affected part. When the temperature of *Ishtika* is tolerable patient is asked to place the *pada tala* over the *Ishtika*.
- The procedure is continued for 20 minutes.

Paschat Karma:

- Wipe the body part where sweda is administered.
- Patient will be allowed to rest for 15 minutes.

Group B: Upanaha Sweda**Poorva Karma:**

- Eranda Patra
- Amla Kanji – 50 – 100m
- Tila taila - 50 ml
- Saindhava lavana -20 to 30 gms
- Bandage cloth – 1
- Chair – 1
- Small bowls – 2
- Gas stove
- A spoon for stirring
- A water bath to heat
- A small towel

Preparation of medicine: The ingredients of Koladi Upanaha Choorna were collected in raw form. These drugs are individually were pulverized to get a fine powder. The powder of each drug was taken in equal quantity and all of them were mixed together to get a uniform mixture. Then a paste of these powdered drugs were prepared by adding Saindhava lavana, Tila taila and Amla Kanji. This paste was taken in a small bowl and warmed gently by placing the bowl in a water bath. Tila taila was taken separately in another bowl, lukewarmed and kept ready for Abhyanga.,

,Preparation of the patient: The patient was asked to sit or lie down in a comfortable position on a chair or bed, exposing the ankle joint to be tied with Upanaha Dravya. The affected ankle joint was cleaned with a piece of cotton dipped in warm water and then the area was wiped dry with a towel. Sthanika Abhyanga with Sukhoshna Tila Taila was done.

PRADHANA KARMA: Lepa of the prepared paste was applied (approximately about 2 - 3mm thickness) and spread uniformly on the affected ankle joint. Eranda patra were placed over the paste to cover the area properly. Later it was tied with a bandage cloth. The procedure was done in the

evening and the Upanaha was retained for a period of 12 hours.

PASCHAT KARMA: The next morning bandage along with the paste was removed and the ankle joint was washed with lukewarm water. The procedure was done for 7 consecutive days.

FOLLOW UP: The patient was advised to report on the 14th days for follow up counting from the day the treatment schedule started.

ASSESSMENT CRITERIA:

Subjective and objective Parameters were used to assess to response to the treatment. Assessment was done on 1st day before starting the treatment, on 7th day after the treatment and on 14th day after follow up. The grades for assessment of all subjective and objective parameters are as follows.

Subjective Parameters: Gulpha Shoola, Gulpha Toda, Gulpha Sthambha

Objective Parameters: Gulpha Shotha,

Complete assessment will be done by gradation as - No improvement, Mild improvement, Moderate improvement and Marked improvement.

Complete relief	100% Improvement
Marked relief	75-99% Improvement
Moderate relief	50-74% Improvement
Mild relief	25-49% Improvement
Unchanged	Below 25% Improvement

OBSERVATIONS:

20 patients were registered in group A and 20 patients in group B. all the patients were thoroughly examined before and treatment as well as after follow up.

The age limit of the subjects in the study was 40 -60 years and the incidence was also 40-60 years. 51–60 years age group (45%) middle to older adult age group, females were predominant, constituting 72.5% (29 patients), while males accounted for 27.5% (11 patients), Hindus were predominant, constituting 75% (30 patients), while Muslims accounted for 25% (10 patients), active occupations, constituting 87.5% (35 patients), while

only 12.5% (5 patients) had sedentary occupations, married, representing 100% (40 patients), while there were no unmarried participants, middle socioeconomic class (52.5%, 21 patients), followed by the higher middle class (30%, 12 patients), and the poor socio-economic class (17.5%, 7 patients), bilateral ankle joint involvement was more common, constituting 60% (24 patients), whereas unilateral involvement accounted for 40% (16 patients), right ankle involvement was seen in 20% (8 patients) and left ankle involvement in 20% (8 patients), Gulpha Shoola and Gulpha Toda were present in all patients (100%, 40 patients), while Gulpha Sthamba was observed in 77.5% (31 patients), tenderness was the most common nature of pain, affecting 57.5% (23 patients), followed by stiffness in 40% (16 patients), while pricking pain was the least common, observed in 20% (8 patients), 37.5% (15 patients) had a positive family history, while 62.5% (25 patients) had no family history, vegetarian dietary habits were slightly more predominant, constituting 52.5% (21 patients), while 47.5% (19 patients) followed a mixed diet, Sama Agni was the most common type, observed in

57.5% (23 patients), followed by Manda Agni in 25% (10 patients). Teekshna Agni accounted for 10% (4 patients), while Vishama Agni was the least common, seen in 7.5% (3 patients), Mrudu Koshta was slightly predominant, observed in 37.5% (15 patients), followed closely by Krura Koshta in 35% (14 patients). Madhya Koshta accounted for 27.5% (11 patients), Alpa Nidra was the most common type, accounting for 32.5% (13 patients), followed by Sukha Nidra in 25% (10 patients), Vishama Nidra in 22.5% (9 patients), and Ati Nidra in 20% (8 patients), the majority had no addictive habits, constituting 80% (32 patients), while 20% (8 patients) reported tobacco consumption, post-menopausal women were predominant, accounting for 60% (24 patients), while menstruating women constituted 22.5% (9 patients), Anupa Desha was predominant, constituting 90% (36 patients), followed by Sadharana Desha in 10% (4 patients), Vata Pitta Prakruti was the most common type, constituting 37.5% (15 patients), followed by Kapha Pitta Prakruti in 25% (10 patients). Pitta Kapha Prakruti accounted for 15% (6 patients), while Kapha Vata and Pitta Vata each constituted 10% (4 patients). Vata Kapha Prakruti was the least common, observed in 2.5% (1 patient), Rajasika Manasika Prakruti was observed in 100% (40 patients), while Satvika and Tamasika Prakruti were not observed in any patient, Sheeta Ahara was the most frequent Aharaja Nidana, accounting for 62.5% (25 patients), followed by Laghu Ahara in 47.5% (19 patients). Rooksha Ahara and Alpa Ahara were each observed in 40% (16 patients), while Abhojana was not reported in any patient, Viharaja Nidana was Ati Prajagara, accounting for 67.5% (27 patients), followed by Divaswapna in 60% (24 patients). Ati Cheshta and Vega Sandharana were each observed in 47.5% (19 patients), Ati Adhva in 32.5% (13 patients), Vishamasana in 27.5% (11 patients), Ati Yana in 20% (8 patients), and Ati Langhana in 2.5% (1 patient), Chinta was the most common Manasika Nidana, accounting for 80% (32 patients), followed by Bhaya in 32.5% (13 patients). Krodha was observed in 30% (12 patients), while Shoka was seen in 22.5% (9 patients), Dhatu Kshaya was present in 55% (22 patients).

RESULTS:

In both groups A and B sample size was 20. On each sample 6 qualitative parameters were measured in 2 follow ups.

According to type of parameter the appropriate statistical tests are as follows:

Type of variable	What is going to check	Appropriate test
Ordinal (Qualitative)	Follow up wise results	Friedman test
	Before and after treatment results	Wilcoxon signed rank test

Table 1: Showing the result of pain:

Pain		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	2.3	2	0.657	0.147	-4.177	<0.001	82.5	Sig.
	AT	0.4	0	0.503	0.112				
Group B	BT	2.35	2	0.59	0.131	-3.919	<0.001	63.8	Sig.
	AT	0.85	1	0.587	0.131				

Table 2 : Showing the result of morning stiffness

Morning stiffness		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	2.25	2	0.55	0.123	-4.107	<0.001	93.3	Sig.
	AT	0.15	0	0.366	0.082				
Group B	BT	2.3	2	0.571	0.128	-4.018	<0.001	76.1	Sig.
	AT	0.55	1	0.51	0.114				

Table 3: Showing the result of Pricking sensation

Pricking sensation		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	1.5	2	0.607	0.136	-3.834	<0.001	90.0	Sig.
	AT	0.15	0	0.366	0.082				
Group B	BT	1.65	2	0.489	0.109	-4.001	<0.001	81.8	Sig.
	AT	0.3	0	0.47	0.105				

Table 4: Showing the result of Swelling

Swelling		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	1.9	2	0.641	0.143	-3.987	<0.001	84.2	Sig.
	AT	0.3	0	0.47	0.105				
Group B	BT	2	2	0.918	0.205	-3.946	<0.001	67.5	Sig.
	AT	0.65	1	0.489	0.109				

Table 5: Showing the result of Degree of flexion

Degree of flexion		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	1.45	1	0.605	0.135	-3.987	<0.001	86.2	Sig.
	AT	0.2	0	0.41	0.092				
Group B	BT	1.25	1	0.786	0.176	-3.358	<0.001	64.0	Sig.
	AT	0.45	0	0.51	0.114				

Table 6: Showing the result of Tenderness

Tenderness		Mean	Median	SD	SE	coxon W	P value	% Effect	Result
Group A	BT	1.5	1.5	0.688	0.154	-3.954	<0.001	90.0	Sig.
	AT	0.15	0	0.366	0.082				
Group B	BT	1.6	1	0.754	0.169				

	AT	0.45	0	0.51	0.114	-4.234	<0.001	71.9	Sig.
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Table 7: Showing the Overall effect

Overall effect	Group A		Group B		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Marked Improvement (75% - 100%)	17	85	5	25	22	55
Moderate Improvement (50% - 75%)	3	15	15	75	18	45
Mild Improvement (25% - 50%)	0	0	0	0	0	0
No Improvement (0% - 25%)	0	0	0	0	0	0
Total	20	100	20	100	40	100

DISCUSSION:

Vatakantaka is a Vatavyadhi causing heel pain due to Vata aggravation and improper foot placement, clinically resembling plantar fasciitis. Management focuses on Sanyu, Asthi and Sandhi using Swedana, Upanaha, Agnikarma, Bandana and Mardana.

This study compared Ishtika sweda and Koladi upanaha sweda in 40 patients. Group A received Ishtika sweda for 7 days, Group B received Koladi Upanaha Sweda for 12 hours for 7 days. Outcomes assessed included Gulpha Shoola, Toda, Sthambha, Swelling, Tenderness and Range of motion.

Most patients were 51-60 years old, with 72.5% females and 60% bilateral involvement. All had pain and pricking sensation. Both groups showed significant improvement ($p < 0.001$), with better pain and tenderness relief in the Ishtika Sweda group. Effect may be due to Vata-Shamaka action, heat-induced vasodilation, improved perfusion, analgesia and increased tissue flexibility.

Overall, 55% showed marked and 45% moderate improvement. Limitations include small sample size and short duration, larger studies are needed.

CONCLUSION:

The present study concludes that Vatakantaka is a Vata-pradhana vyadhi affecting the foot, particularly the Khuddaka Pradesha and is associated with pain aggravated by improper or uneven weight-bearing. It can be correlated with plantar fasciitis a common cause of heel pain. The study demonstrated that both Ishtika sweda and Koladi Upanaha sweda provided significant relief in the signs and symptoms of Vatakantaka. However, Ishtika sweda showed comparatively better improvement in both subjective and objective parameters. Although statistical analysis revealed significant effect in both groups, the overall assessment indicated a greater therapeutic response with Ishtika sweda. Thus, Ishtika sweda can be considered more effective than Koladi Upanaha

sweda for the management of Vatakantaka.

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