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A SINGLE ARM CLINICAL TRIAL TO STUDY THE EFFECT OF ISHTIKA SWEDA IN VAATKANTAKA (PLANTER FASCIITIS)

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ABSTRACT

This clinical study investigates the efficacy of Ishika Sweda, a specialized Ayurvedic sudation therapy, in managing Vaatkantaka (Plantar Fasciitis). Vaatkantaka, characterized by heel pain and stiffness, affects daily functionality and quality of life. A single-arm clinical trial was conducted on 20 patients to evaluate the effect of Ishika Sweda on subjective (pain, stiffness) and objective (tenderness, swelling) parameters. The outcomes were assessed using the Visual Analogue Scale (VAS) and standardized swelling and stiffness scores. The Wilcoxon signed-rank test demonstrated a statistically significant improvement across all parameters ($p < 0.05$), highlighting the efficacy of Ishtika Sweda. These findings underscore the potential of Avurvedic modalities in managing conditions like plantar fasciitis with minimal side effects.

KEYWORDS: Ishika Sweda, Vaatkantaka, Plantar Fasciitis, Ayurveda, Sudation Therapy.

INTRODUCTION

Vaatkantaka is a painful heel condition arising from improper foot placement or walking on uneven surfaces for extended periods. It is described in classical Ayurvedic texts like the Sushruta Samhita and Yogratnakar as Pada Kantaka and is associated with pricking pain in the heel. From an Ayurvedic perspective, the condition is linked to the aggravation of Vata dosha in the Snayu (ligaments) and Sandhi (joints) of the foot. Acharyas have-recommended treatments such as Snehana (unctuous therapies), Swedana (sudation therapies), and Agnikarma(thermal cauterization) for conditions involving aggravated Vata dosha.

Modern medicine correlates Vaatkantaka with Plantar Fasciitis, an inflammatory condition affecting the plantar fascia, a thick connective tissue running along the sole. The condition manifests as pain, often exacerbated by the first steps in the morning or prolonged activity. Conservative treatments like nonsteroidal anti-inflammatory drugs (NSAIDs), heel pads, and stretching exercises offer limited relief and are associated with recurrence and side effects.

Ishika Sweda, a modified form of sudation therapy using heated bricks, is described in Ayurveda as an effective, cost-efficient, and minimally invasive treatment for Vaatkantaka. The therapy combines Ruksha Sweda properties with localized heat application to alleviate pain and stiffness by pacifying Vata dosha. This study explores the efficacy of Ishtika Sweda in relieving symptoms of Vaatkantaka and improving the quality of life for patients.

This study investigates the clinical efficacy of Ishika Sweda in alleviating symptoms of Vaatkantaka and improving patient functionality.

MATERIALS AND METHODS

Study Design

A single-arm clinical trial was conducted on 20 patients diagnosed with Vaatkantaka at the Panchakarma OPD and IPD, SMBT Ayurved Hospital, Igatpuri. Treatment lasted for 6 days with follow-up on the 6th day.

Inclusion Criteria

- Patients aged 20-60 years presenting with heel pain, stiffness, or tenderness.
- Medically fit for Swedana therapy.

Exclusion Criteria

- Patients <20 or >60 years.
- Cases with fractures, systemic illnesses (e.g., uncontrolled diabetes, RA, hypertension).
- Contraindications for sudation therapy.

Intervention

- Purva Karma (Preparation): Patient seated comfortably; vitals recorded.
- Pradhana Karma (Main Procedure): Heated bricks wrapped in cloth applied to the heel in alternation to maintain temperature and induce sweating.
- Paschat Karma (Aftercare): Patient rested post-procedure.
- Duration: 1 session daily for 6 days.

Outcome Measures

- Subjective: Pain (VAS), Stiffness (Maryland Foot Score).
- Objective: Tenderness (graded 0-4), Swelling (graded 0-4).

Statistical Analysis

Data before and after treatment were analyzed using the Wilcoxon signed-rank test, with $p < 0.05$ considered statistically significant.

RESULTS

Clinical Outcomes

Parameter	Mean(day 0)	Mean(day 6)	P value
Pain (VAS)	5.80	3.05	<0.001
Stiffness	2.15	0.90	<0.001
Tenderness	2.85	1.05	<0.001
Swelling	2.35	0.65	<0.001

All clinical parameters showed statistically significant improvement following /shika Sweda.

DISCUSSION

Interpretation of Findings

The present clinical study showed significant improvement in pain, stiffness, tenderness, and swelling after six days of Ishika Sweda therapy in patients suffering from Vaatkantaka (Plantar Fasciitis). The mean pain score reduced by almost 48% (5.80 → 3.05), which is a clinically meaningful improvement. Similarly, stiffness scores decreased by over 55% (2.15 → 0.90), highlighting a clear functional benefit in foot mobility and gait. Reductions in tenderness (63%) and swelling (72%) further confirm the anti-inflammatory and analgesic effects of the therapy.

These results suggest that Ishika Sweda addresses both symptomatic relief (pain reduction) and functional restoration (improved mobility), which are the primary goals in plantar fasciitis management.

Mechanism of Action

1. Ayurvedic Perspective.

• Vata pacification: The dry, penetrating heat of

Ruksha Sweda counteracts the Ruksha (dry) and Sheeta (cold) qualities of aggravated Vata dosha.

- Snigdha and Ruksha balance: While oil-based fomentation (Snigdha Sweda) may aggravate congestion in some cases, the use of heated bricks provides dry heat, directly addressing the pain and stiffness without adding excess moisture.
- Srotoshodhana: Localized heat facilitates the removal of Aavarana (blockages) in Snayu and Sandhi, improving circulation and nourishment of tissues.

2. Modern Biomedical Perspective

- Thermal effect: Heat therapy increases local tissue temperature, leading to vasodilation and improved blood perfusion, which accelerates healing.
- Pain modulation: Heat stimulates thermoreceptors, which can inhibit nociceptive signals (gate control theory of pain).
- Inflammation reduction: Sustained warmth reduces muscle spasm, improves tissue oxygenation, and promotes resorption of inflammatory exudates.
- Fascia flexibility: Heat enhances collagen extensibility, reducing plantar fascia stiffness and restoring elasticity, thereby decreasing the strain on the calcaneal origin.

This dual explanation demonstrates how traditional Ayurvedic reasoning aligns with modern pathophysiological mechanisms.

Comparison with Previous Studies

Previous studies on related Ayurvedic interventions, such as Agnikarma and Ruksha Sweda, have demonstrated significant efficacy in reducing pain and stiffness in Vaatkantaka.

For example, Dr. Rajni Patle (2016) reported significant pain relief with Agnikarma, while Dr. Harit (2018) found favorable results with Nirgundi iontophoresis compared with Agnikarma. Similarly, modern studies on physiotherapy-based heat modalities (e.g., ultrasound, hot packs) show parallel outcomes in plantar fasciitis management. The present study aligns with these findings and highlights Ishika Sweda as a simpler, non-invasive, and cost-effective alternative.

Strengths

- Non-invasive and safe, with minimal risk of side effects compared to pharmacological or surgical interventions.
- Cost-effective and easily administered in outpatient settings.
- Directly integrates Ayurvedic principles with measurable biomedical outcomes.

Limitations

• The sample size (n=20) is relatively small, limiting generalizability.

• Lack of a control or comparison group

prevents assessment of placebo effect or natural healing.

• Short follow-up period (6 days) does not allow evaluation of long-term efficacy or recurrence rates.

Clinical Implications

The findings suggest that /shika Sweda could serve as a valuable integrative therapy for plantar fasciitis, particularly for patients seeking non-pharmacological and non-invasive treatment options. Its simplicity and affordability make it suitable for use in both rural and urban.

Ayurvedic healthcare settings. Furthermore, its dual alignment with Ayurvedic theory and biomedical mechanisms strengthens its position as a bridge between traditional and modern healthcare approaches.

Future Scope

Future research should focus on randomized controlled trials with larger sample sizes, longer follow-up periods, and direct comparisons with conventional therapies such as NSAIDs, corticosteroid injections, or physiotherapy.

Studies exploring biochemical markers of inflammation before and after Ishika Sweda could also help clarify itc physiological mechanisms.

CONCLUSION

Ishika Sweda therapy significantly reduces pain, stiffness, tenderness, and swelling in Vaatkantaka (Plantar Fasciitis). Its non-invasive nature, affordability, and minimal side effects make it a promising integrative approach in managing plantar fasciitis. Larger randomized controlled trials with longer follow-up are recommended to confirm these findings.

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