

Case Series to Evaluate the Efficacy of Selected Treatment Modality in the Management of *Vātakantaka* (Planter Fasciitis)

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ABSTRACT

Heel pain is the most prevalent condition these days, and it affects 1 in 10 people at some point in their lives. Various disorders can cause heel discomfort, but one with a high prevalence rate is plantar fasciitis. *Vātakantaka* and Plantar Fasciitis may be connected in Ayurveda. Walking on an uneven surface and suffering repeated injuries cause *Vāta Prakōpa* (vitiation of humor), which develops a stinging pain similar to a thorn in the heel area and ultimately results in *Vātakantaka*. Adults' heel pain is frequently brought on by plantar fasciitis. Pain that is particularly intense with the first few steps made in the morning is how the disorder typically shows. Plantar fasciitis typically resolves on its own. However, when there is less time between the onset of symptoms and the start of treatment, symptoms typically go away faster. The purpose of this study is to determine the efficacy of selected treatment modalities in the management of *Vātakantaka*. Four case presentations with a follow-up of one month were studied. Treatment modality, including *Ēranda Saptaka Kwātha*, *Yōgarāja Guggulu*, *Dhāthri Chūrna*, *Navarathna Kalka*, *Sarshapa Thaila*, *Ketakēla Pattu*, and *Agni Karma*, was advised for four weeks. Pre- and post-treatment assessments of subjective and objective criteria were made. According to the results, most of the symptoms were healed 100%, while some were reduced up to 66.66% and 33.33%. It may be concluded that the selected treatment modality is a secure and reliable treatment for *Vātakantaka*.

Key words- *Agni Karma*, Planter fasciitis, Treatment modality, *Vātakantaka*, *Vāta Prakōpa*,

INTRODUCTION

A musculoskeletal disease called plantar fasciitis primarily affects the fascial enthesis. Thought to have a mechanical origin, the development of plantar fasciitis is still poorly understood. Particularly, lower-limb biomechanics and foot types associated with pesplanus that result in a reduced medial longitudinal arch are hypothesized to put too much tension on the fascia, leading to tiny tears and persistent inflammation [1]. One of *Nānātmaja Vātavyādhi* (illness due to *VātaDōsha*) is *Vātakantaka* (plantar fasciitis). *Vātakantaka* and Plantar Fasciitis may be connected in Ayurveda. Walking on an uneven surface and suffering repeated injuries cause *VātaPrakōpa*, which produces prickling discomfort like a thorn in the heel region and eventually results in *Vātakantaka*[2], [3]. A common complaint of many people who need expert orthopedic therapy and are mostly experiencing persistent discomfort behind their heels is heel pain, which is typically brought on by plantar fasciitis (PF). According to estimates, one in ten people will experience PF at some point in their lives. A higher incidence of PF, which is more prevalent in middle-aged obese females and young male athletes, is found in the athletic population, although not all cases necessitate medical attention.

The terms painful heel syndrome, persistent plantar heel pain, heel spur syndrome, runner's heel, and calcaneal periostitis have all been used to refer to PF in the literature. [4], [5], [6]. Walking on uneven or irregular surfaces can vitiate *Vāta*, which then builds up in the ankle joint and creates discomfort as though it were pierced by thorns. *Vātakantaka* (Plantar Fasciitis) is the resultant name [7],[8], [9], [10].

Although the worst pain usually starts with the first few steps in the morning, this symptom is not always present in patients with plantar fasciitis. Patients frequently experience pain at the start of an exercise that subsides or disappears as they warm up. The pain can occasionally be accompanied by stiffness and can also happen after prolonged standing. In more extreme circumstances, the discomfort will also get worse as the day wears on. The medial tubercle of the calcaneus is the origin of the thickened fibrous aponeurosis known as the plantar fascia, which extends forward to form the longitudinal foot arch [11], [12].

One of the *Vātavyādhi* is named *Vātakantaka*. Due to *Vāyu*, it is characterized by *Shūla* (pain) and *Shōtha* (inflammation) in the *Khudak* (heel). Consuming *Mityāhāra* (unhealthy food), *Rūksha-Sheeta Bhōjana* (excessively dry and cold food), *Rātri Jāgarana* (waking up at night), *Vishama Chēsta* (doing the incorrect thing), etc., can all be regarded as general *Nidāna*(causes) for *Vātakantaka*^[13]. *Vātakantaka* is also known as *Pāda Kantaka*, according to *Yōgaratnākara* (classical text). It is clinically distinguished by a prickling sensation in the *Pāda* (foot). Owing to *Dōsha Sansarga* (pathological bondage between two *Dōshas*), localized *Kapha* (*Sthānika Kapha*) and aggravated *Vāta* (*Prakupita Vāta*) combine to induce stiffness and pain (*Stambha*), especially in the morning. When *PrakupitaVāta* is localized in *Snāyu* (ligaments) and *Sandhi* (joints) *PraDōsha* (region), *Achārya Sushruta* has mentioned *Upakramās* (treatment modalities) such as *Snēhana* (unction), *Upanāha* (poultice), *Agnikarma* (therapeutic cauterization), and *Bandhana* (bandaging) under the context of *Vātavyādhi Chikitsa*. *Acharya Charaka* suggests *Swēdana* as a particular therapeutic method to alleviate vitiated *Vāta-Kapha Dōsha*^[14].

The Purpose of the Study

The purpose of this study is to determine the efficacy of selected treatment modality in the management of *Vātakantaka*.

RESEARCH METHODOLOGY

Case Presentations

Case 1:

A 57-year-old female patient (retired teacher) attended the OPD of Gampaha Wickramarachchi Ayurveda Teaching Hospital (1090 B) with complaints of pricking pain, tenderness, numbness, swelling, and difficulty walking in the morning for five years. Initially, she did not care about that and the condition became worse before one year. Also, the pain persisted the whole day. She had also received injections for this from the National Hospital in Colombo. She had no history of diabetes, hypertension, hyperlipidemia, or any other complaints. Also, she had no family history; as per her dietary history, she had taken an immense amount of “Anleene” milk and calcium-containing foods with calcium tablets. There were no abnormalities in her menstrual history. Her drug history indicated that she had taken “Murunga” tablets for a long time.

Case 2:

A 34-year-old female patient (working aid) attended the OPD of Gampaha Wickramarachchi Ayurveda Teaching Hospital (1098 B) with complaints of pricking pain and difficulty walking in the morning for one

and a half years. She had used safety shoes for 12 years abroad. There were no other complaints, like diabetes and hypertension. But she had an indigestion condition. As she worked abroad, she consumed little rice and fish. Also, she overused “Murunga” tablets and had no family history

Case 3:

A 55-year-old female patient (housemaid for eight years and now a housewife) attended the OPD of Gampaha Wickramarachchi Ayurveda Teaching Hospital (1099 B) with complaints of pricking pain, tenderness, swelling, and difficulty walking in the morning for six months. After a few steps, the pain disappeared. She had had a history of hypertension and hypercholesterolemia for two years. Also, she had bilateral knee joint pain for eight years and cataracts in both eyes for one year. Recently, she lived in an apartment at Colombo Grandpas. As she worked as a housemaid abroad, she consumed salads and milk. There is no related family history and no abnormalities in her menstrual history.

Case 4:

A 48-year-old male police officer attended the OPD of Gampaha Wickramarachchi Ayurveda Teaching Hospital (1201 B) with complaints of pricking pain, tenderness, and difficulty walking in the morning for two years. As others complain, he had gastritis for three years and constipation for three months. He consumed alcohol and cigarettes only at parties. There is no related family or drug history.

Treatment Modality

Treatment was planned for 4 weeks with Agni Karma.

Ēranda Sapthaka Kwātha– 30 ml twice daily after foods

Yōgarāja Guggulu– 2 Guli twice daily with luke warm water

Dhāthri Chūrma– 10 g mixed with 120 ml boiled water at night

Navarathna Kalka– 1 g twice a day with luke warm water

*Sarshapa*oil- Apply to feet twice a day

Ketakēla Pattu– Apply to feet twice a day

Agnikarma– performed from 2nd week to 4th week

Criteria for Assessment of Symptoms

Assessment was done on improvements in signs and symptoms with the help of a suitable scoring method. Here, cases of *Vātakantaka* were assessed by comparing the symptoms before and after treatment. Then the data were analyzed by Microsoft Excel. The patients were monitored for one month following treatment. Even after one month of follow-up, no indications or symptoms of PF were noted.

Limitations

Patients with traditional *Vātakantaka* indications and symptoms as defined by both contemporary science and Ayurveda were chosen. Additionally, men and women between the ages of 30 and 60 were chosen. Excluded from the study were expectant mothers, nursing mothers, patients with life-threatening conditions such as HIV, Hepatitis B, psychiatric disorders, bleeding disorders, and COVID-19-positive patients.

Subjective Criteria: [15].

Table I: VAS Scale (Visual Analogue Scale):- Scale Score Severity of Pain

Parameters	Grade
No pain	0
Mild pain (discomforting)	1
Moderate pain (disturbing daily activities)	2
Severe pain (unbearable pain)	3

Objective Criteria: [15].

Table II: Tenderness

Parameters	Grade
Nil (No tenderness)	0
Mild tenderness (causing the patient to wince on digital pressure)	1
Moderate tenderness (causing the patient to wince and withdraw on digital pressure)	2
Severe tenderness (Patient does not allow to touch)	3

Table III: Swelling

Parameters	Grade
Nil (No swelling)	0
Mild Swelling (2-4 mm of depression)	1
Moderate Swelling (4-6 mm of depression)	2
Severe Swelling (6-8 mm of depression)	3

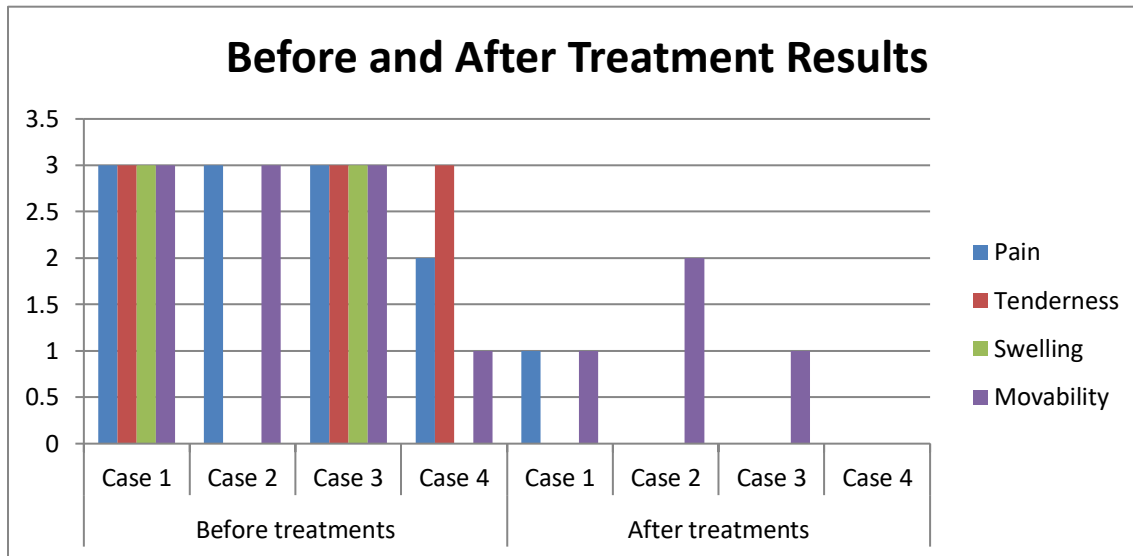
Table IV: Movability (Difficulty in Walking)

Parameters	Grade
Nil (No difficulty in walking)	0
Mild (Can walk with a simple aid)	1
Moderate (Can walk with a strong aid)	2
Severe (Unable to walk even with a aid)	3

RESULTS AND DISCUSSION

Table V: Before and After Treatment Results

Parameters	Before treatments				After treatments			
	Case 1	Case 2	Case 3	Case 4	Case 1	Case 2	Case 3	Case 4
Pain	3	3	3	2	1	0	0	0
Tenderness	3	0	3	3	0	0	0	0
Swelling	3	0	3	0	0	0	0	0
Movability	3	3	3	1	1	2	1	0



Plettner introduced the term “calcaneal spur” at the start of the 20th century. The plantar insertion of the plantar fascia and muscles is where the “plantar heel spur” forms, whereas the “dorsal heel spur” forms where the Achilles tendon inserts. These characteristics nearly match *Vātakantaka*, a disease entity recorded in classical *Ayurvedic* texts [15]. In this study patients were selected from same geographical areas and from same cultural units. The Omani series was chosen for an external comparison because of its distinct historical-cultural, genetic, and geographic background. It reveals startling distinctions between the Italian group and parallels with the Spanish one. The similar geographical topography of the Italian and Spanish series accounts for these disparate but unexpected outcomes. In light of our findings, a thorough examination of the archaeological investigations from these sites is required to compare our theories—especially the one about the impact of footwear and habits. Every sample is unique because of the geological and geographic features of their surroundings, as well as lifestyle choices related to their daily jobs, travel, and footwear. The disparities are thought to be caused by all of these causes [16].

Pain was healed 100% in all cases except case 1, and it was healed up to 33.33%. Tenderness and swelling were healed 100% in all cases, while difficulty walking was healed 100% in case 4. In cases 1 and 3, difficulty walking was healed up to 33.33%, while in case 2, it was healed up to 66.66%.

Ēranda Saptaka Kwātha is *Vātaghna* and pacifies *Vāta*, hence reducing pain and swelling. *Yōgarāja Guggulu* is indicated in the management of *VātaVyādhi* (disease), which acts as *Shūlahara* (analgesic) and *Shōta Hara* (anti-inflammatory). All diseases occurred due to the formation of *Āma* (undigested food). Both *DhātriChūrna* and *Nawarathna Kalka* improve digestion power, as *DhātriChūrna* has *Virēchana* (purgative) action and *Nawarathna Kalka* has *Pāchana* (digestive action) Karma. *DhātriChūrna*: From which *Dhātrihas SheetaVīrya* (cold potency), which collectively acts on *Tridōsha* (three humors). It also acts as *Rasāyana* (rejuvenation), which means improving the quality of life, *Ojadushti* (vitiation of essence), and *DhātuBalyakar* (strength tissues). It also acts as *Rasa Raktagata Sama Dōsha Pāchana* & *Prasādana* (balance of blood tissue). So the basic pathology can be stopped. *Dhātri* is *Tridōshashamak* is *Kaphavātshāmak* & *Pittashāmak* by *Tikta* (bitter) *Rasa* (taste). Because of the omega-3 fatty acids in *Sharshapa* (mustard oil), oil eases stiffness and pain. *Ketakēla Pattu* relieves pain, especially joint and muscle pains.

Because the *Ushna* (hot) *Guna* (action) of *Agnikarma* (cautery) is the polar opposite of the *Vāta* and *KaphaDōshās*, it treats all *Vātaja* and *Kaphaja* illnesses. Every *Dhātu* (tissue) has its own *Dhātvagni*, and when it is low, ailments start to develop, according to *Ayurveda*. *Agnikarma* treats the sickness in this situation by supplying external heat and raising *Dhātvagni* (digestive fire), which aids in digesting the exacerbated *Dōshas* (body humors). The local thermotherapy may speed up tissue metabolism, which could

result in the expulsion of toxic byproducts and undesirable metabolites. Heat may activate the lateral spinothalamic tract (SST), which activates the descending pain inhibitory fibers (DPI) and releases endogenous opioid peptide. This peptide binds to opioid receptors in the substantia gelatinosa and prevents the release of Substance P (pre-synaptic inhibition).

CONCLUSION

From this case series, it can be concluded that *Vātakantaka* can be effectively managed with a selected treatment modality. However, further clinical research with a larger sample size may be needed to further authenticate the efficacy.

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CONSENT FORM

EFFECTS ON KIRTAN KRIYA YOGA MEDITATION IN MEMORY POWER OF UNIVERSITY STUDENTS

Participant's consent form

Investigator	Telephone Number	Address
Dr. S. L. G. Sewand	071-2884994	11114, Suhada MA, Gampaha rd, Yakkalamulla

Please circle your answer

Did you have an opportunity to ask questions and discuss about study? Yes No

Have you received satisfactory answers to the questions you asked about project? Yes No

Who explained the study to you?
Dr. S. L. G. Sewand

Do you agree to take part on your own wish? Yes No

I understand that the information I give is confidential Yes No

I give my consent to take part in the study and I agree to involve myself to the research procedures. Yes No

Do you agree?

Name L. S. GUNASENA, D. S. P. I. M. Karunasekara, A. K. Rasaja

Signature [Signature] [Signature] [Signature]

Date 2023/09/04