

Exploring Modified *Siravedha* for Effective Treatment of *Vatakantaka* (Plantar Fasciitis)- A Single Case Report

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ABSTRACT:

Plantar fasciitis is one of the common causes of heel pain and it affects one in ten persons throughout their lifetime. Due to over strain to the muscles and ligaments of the plantar region, over-stretching of the plantar fascia is leading cause of the manifestation of plantar fasciitis. Looking at aetiopathogenesis, signs & symptoms, *Vatakantaka* mentioned under *Naanatmaja Vatavyadhi* can be correlated with plantar fasciitis and treatment modalities prescribed for it can be adopted for its management. *Siravedha* (~ venepuncture) is a unique modality given by Acharya Sushruta to let out noxious blood from the painful site and gradually cure the disease. A 39-year-old female patient visited *Asthi-Sandhi-Marma Roga* OPD with complaints of pain in the left heel region. Based on examination, she was diagnosed a case of plantar fasciitis and 4 sittings of *Siravedha* were done once weekly for 4 weeks after local *Snehana* (~Therapeutic oleation) and *Swedana* (~ sudation therapy) at foot region. Effective relief was achieved as pain and tenderness decreased significantly after each session. The Visual Analog Scale score dropped from 8 to 0, while tenderness decreased from Grade 4 to 0. Additionally, there were no recurrences during the 6-month follow-up period.

KEYWORDS: Calcaneal spur, Plantar fasciitis, *Siravedha*, *Vatakantaka*.

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INTRODUCTION:

Plantar fasciitis is one common cause of heel pain, and it affects one in ten persons throughout their lifetime. Overstrain to the muscles and ligaments of the plantar region,

over- stretching of the plantar fascia are leading causes for the manifestation of plantar fasciitis. Looking at aetiopathogenesis, signs & symptoms, *Vatakantaka* mentioned under *Naanatmaja*

Vatavyadhi may be correlated with plantar fasciitis and it is manifested from placing the foot incorrectly on the ground or walking for an extended amount of time on an uneven surface.^[1] Acharya Yogaratnakara has named *Vatakantaka* as *Padakantaka* and prickling sensation in the *Paada* (~foot) is one leading symptom.^[2] Madhavakar has said, pain in the ankle region due to foot moving improperly is found in *Vatakantaka* ^[3], which produces *Shula* (~pain) and *Stambha* (~stiffness), especially in the morning hours.

Acharya Sushruta has mentioned *Upakramas* (~treatment modalities) such as *Snehana* (~unction), *Upanaha* (~poultice), *Agnikarma* (~therapeutic cauterization), *Siravedha* and *Bandhana* (~bandaging) under context *Vatavyadhi Chikitsa* to counter *Prakupita Vata* (~Provocative stage of *Vata Dosha*) when localized in *Snayu* and *Sandhi* (~ Joints).^[4] *Siravedha* is a unique modality given by Sushruta to let out noxious blood from the painful site and gradually cure the disease. During the context of *Sirvedhana Vidhi* Acharya Susrutha explains, *Siravedha* two *Angula* above *Kshipra Marma* (~first interdigital web space of lower limbs) as a treatment modality for *Vatakantaka*.^[5] Traditionally, *Siravedha* was performed by puncturing the vein with a scalpel. However, in this instance, we opted for the use of an 18 G scalp vein set for the sake of procedural ease and to minimize post-operative pain.

CASE RPEORT:

A 39-year-old female non-diabetic, non-hypertensive patient presented in *Asthi Sandhi Marma* OPD with left heel pain for the last 10 months. She was a bus conductor by profession and had a history of wearing

inappropriate footwear for long duration. The pain was severe for the first few steps after awakening from the bed in the morning and standing up from a long sitting posture. The pain was barely noticeable for the first several days before gradually getting worse. The pain aggravates on standing and walking and is relieved by rest. There was no history of any kind of bony trauma. She consulted Allopathic physicians and was given non-steroidal anti-inflammatory drugs and physiotherapy. She got symptomatic relief for 1 month. She sought medical advice once more and took steroid injections in the plantar region, but there were no changes in signs and symptoms, and surgery was recommended.

On general examination, she was found hemodynamically stable (pulse rate 62/min regular with normal volume and blood pressure of 120/82 mm Hg). On palpation tenderness at the heel, most prominent at the medial heel region was noted. On dorsiflexion of ankle the tenderness worsened. Haemogram, liver function test, kidney function test, and serum calcium were in normal limits. X-ray of the foot was also normal. As per clinical assessment, the visual analogue scale (VAS) score was 8 and grade - 4 tenderness was noted in the left foot.

THERAPEUTIC INTERVENTION:

Based on sign and symptoms, she was diagnosed as a case of *Vatakantaka* and planned *Siravedha* weekly once for four weeks. The procedure was explained to the patient, and after obtaining written informed consent, *Siravedha* was performed. The timeline for drug treatment is placed in Table 1

Table-1: Timeline

Date	Clinical findings	Pain in VAS & Tenderness	Therapeutic Intervention
12/01/2017	Pain in the left heel, and difficulty in walking for the last 10 months. The severity of pain was severe in the morning, and tenderness was present at the medial aspect of the heel.	Before treatment VAS- 8 Tenderness- Grade 4 After treatment VAS- 3 Tenderness- Grade 1	First sitting of <i>Siravedha</i>
19/01/2017	Significant relief from pain and tenderness. Morning heel pain persisted.	Before treatment VAS- 5 Tenderness- Grade 2 After treatment VAS- 2 Tenderness- Grade 1	Second Sitting of <i>Siravedha</i>
26/01/2017	Slight pain and tenderness were only present. Morning heel pain also reduced.	Before treatment VAS- 3 Tenderness- Grade 1 After treatment VAS- 0 Tenderness- Grade 0	Third Sitting of <i>Siravedha</i>
02/02/2017	Got relief from all the signs and symptoms.	Before treatment VAS- 1 Tenderness- Grade 0 After treatment VAS- 0 Tenderness- Grade 0	Fourth Sitting of <i>Siravedha</i>



Figure 1: Materials Required for *Siravedha*



Figure 2: Procedure of *Siravedha*

Table-2: Contents and Properties of *Murivenna*

Name	Latin name	Virya	Vipaka	Karma	Possible action
Karanja	<i>Pongamia pinnata</i> (L.) Pierre	<i>Ushna</i> (~hot)	<i>Katu</i> (~bitter)	<i>Sbothbara</i>	Anti-inflammatory
Kumari	<i>Aloe vera</i> Linn.	<i>Sheeta</i> (~cold)	<i>Katu</i>	<i>Sbothbara</i>	Anti-inflammatory
Tambula	<i>Piper betle</i> L.	<i>Ushna</i>	<i>Katu</i>	<i>Sbothbara</i>	Anti-inflammatory
Shigru	<i>Moringa oleifera</i> Linn.	<i>Ushna</i>	<i>Katu</i>	<i>Sbothbara</i>	Anti-inflammatory
Shatavari	<i>Asparagus racemosus</i> Willd.	<i>Sheeta</i>	<i>Madhura</i> (~sweet)	<i>Rasayana</i>	Anti-ageing
Palandu	<i>Allium cepa</i> Linn.	<i>Isbat Ushna</i> (~slightly hot)	<i>Madhura</i>	<i>Vrana-Sbothbara</i>	Anti-inflammatory
Paribhadra	<i>Erythrina variegata</i> Linn.	<i>Sheeta</i>	<i>Katu</i>	<i>Sbothbara</i>	Anti-inflammatory
Tandulodaka	<i>Oryza sativa</i> Linn.	<i>Sheeta</i>	<i>Madhura</i>	<i>V-P Shamaka</i>	Anti-inflammatory

Procedure:

After obtaining informed consent necessary investigations (HIV, hepatitis B surface antigen, bleeding time, and clotting time) were carried out, after confirming that all the reports were within normal limits, the patient was prepared for *Siravedha*. She was given *Yavagu* (~gruel) one hour before the procedure. A mobile medical unit was equipped with all the requisite instruments and materials essential for conducting *Siravedha*. [Figure-1] After ensuring the aseptic precautions, the patient was made to sit on the examination table, with her lower limbs hanging down from the table, and a stool was used as a support. Local *Snehana* was done with *Murivenna* and *Swedana* was done with hot water for 15 minutes. A tourniquet was applied 4 *angula* above the ankle joint. The needle of scalp vein set of size 18 G was introduced to the *Sira* (~Vein) 2 *Angula* above from the *Kshipra Marma* (~first inter digital web space), which is in the dorsal venous arch of the foot. Following

the flow of blood, the tourniquet was promptly removed, and the exposed end of the scalp vein set was positioned into a kidney tray. Approximately 80 ml of blood was let out and the needle was removed after a complete stoppage of flow of blood by itself. [Figure-2] The Total time duration for the completion 1st sitting of *Siravedha* was 16 minutes. The area was cleaned, and dressing was done with *Murivenna taila*. After dressing, the patient was kept under observation for 3 hours and asked to lie down in supine position with foot end elevated. She was also advised to take plenty of fluids and take rest on the day of the procedure. The same procedure was done in next 03 sittings. Total 04 sittings done at weekly intervals.

Follow-up and Outcomes:

After the first sitting, the pain score on VAS was reduced from 8 to 3, and the tenderness grade from Grade 4 to Grade 1. After the completion of 04 sittings, tenderness at the

medial aspect of the left heel was absent, and there was complete remission of morning heel pain. The patient was followed for six months. No signs and symptoms of plantar fasciitis were reported even after six months of follow-up.

DISCUSSION:

The most common cause of heel pain is plantar fasciitis, repeated *Abhigata* (~micro-trauma) in form of ill fitted shoes during working hours might be played a prime role in producing *Ruja* (~pain) in this case. Pain in heel region at early morning and stiffness occurs due to vitiation of *Vata-Rakta dosha* and *Sthanika Kapha* (~localized *Kapha*) present in *Gulpha sandhi* (~ankle joint). The pain starts when patients try to walk after waking up from bed. Early morning is the natural time for *Kapha Prakopa* (~provocative stage of *Kapha*).^[6] That is why it produces *Stambhata* (~stiffness) at early morning. Due to *Nidana*, *Vata* and *Rakta* are vitiated and get localized at the *Gulpha Sandi Pradesha* (~ankle joint) producing symptoms of *Vatakantaka*. Various treatment options such as *Agnikarma*, *Siravedha*, and *Eranda Taila Paana* (~Internal administration of castor-oil) are described in Ayurveda for the management of *Vatakantaka*. Acharya Chakradatta, Bhavaprakasha and Yogaratnakara have recommended *Raktamokshana* as a better option for *Vatakantaka*.^{[7]-[9]}

The treatment option used in this study is *Siravedha* along with local *Snehana* with *Murivenna* and *Swedana*. *Murivenna* used for *Snehana* possess *Ushna Veerya* (~hot potency) which pacifies *Vata Dosha*. [Table-2] Thus, *Snehana* with *Murivenna* and *Swedana* with hot water provides relief from symptoms *Ruja* and *Stambha* by controlling aggravated *Vata Dosha*. Blood-letting serves

as a purification therapy, recommended for removing vitiated *Dosha* or blood from the nearest route to the disease's main or root site, known as *Roga Adhishthana*. In the case of plantar fasciitis *Kandaras* (~tendons) are affected. Tendons are considered *Upadhatu* (~subtissues) of *Raktadhatu* (Blood), and restoring their health involves blood-letting, which helps alleviate signs and symptoms of plantar fasciitis.^[10] From a contemporary viewpoint, activating large sensory fibers through peripheral tactile receptors suppresses the transmission of pain signals, both locally and across various body segments. As a result, pain in the heel region is diminished. Blood-letting also induces several physiological changes in the body, including enhanced local blood supply, improved local metabolism, optimization of the local drainage system, enhancement of sympathetic nerve function, and stimulation of the production of immune-related T-lymphocytes. These changes potentially play a role in alleviating symptoms associated with plantar fasciitis.

[11]

CONCLUSION:

The patient experienced significant improvement after four sessions of *Siravedha*, with no recurrence of symptoms over six months of follow-up. *Siravedha* proves to be an effective treatment for *Vatakantaka* (Plantar fasciitis).

Declaration of Patient Consent:

Authors certify that they have obtained patient consent form, where the patient/caregiver has given his/her consent for reporting the case along with the images and other clinical information in the journal. The patient/ caregiver understands that his/her name and initials will not be published, and due efforts will be made to

conceal his/her identity, but anonymity cannot be guaranteed.

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