



# To Evaluate the Effect of *Agni Karma* And *Sira-Vyadha* In The Management Of *Vatakantaka* --- A Study Protocol

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## ABSTRACT

Calcaneal spur is a bony overgrowth from the calcaneum bone which occurs when foot is exposed to constant strain leads to calcium deposition in heel bone. It can be correlated with *Vatakantaka* in Ayurveda *Vatakantaka* is one type of *Vata-vyadhi*, which is the most common form of articular disorder. *Agnikarma* and *Siravedha* both are helpful in management of *Vatakantaka*.

**Aim and Objectives:** To prove the efficacy of both the procedures.

**Methodology:** For the duration of study, 60 patients are being enrolled out of which 30 pts are to be put on agnikarma treatment and another 30 will be given siravedha treatment.

**Results:** Changes are to be ascertained on the basis of subjective and objective parameters.

**Keywords:** *Vatakantaka*, Calcaneal spur, *Agnikarma*.

## INTRODUCTION:

Ayurveda is the science of life since immemorial times and has been showing the ideal way of living which promises a disease free, healthy and long life. *ShalyaTantra* is prime branch which is rich in all aspects of surgical concepts.

In Ayurveda, *Vatakantaka* is basically a *Vyadhi* of vitiated *Vatadosha* and comes under *Vatavyadhi*. *Acharya Sushruta* has mentioned the disease in *Nidansthana*<sup>1</sup>. He stated that, improper pattern of walking, uneven pathways or excessive walking is the cause of disease. Same pathology is mentioned by *Acharya Vagbhata* at *Vagbhatnidandhyaya*<sup>2</sup> From above all views of ayurvedic texts, we can conclude that pain over heel area is the main symptom of disease.

Ayurveda has mentioned the treatment of *Vatakantaka* under *Vatavyadhichikitsa*. Both *Bahya* and *Abhyantar Chikitsas* are to be done to treat it, which include local *Snehan*, *Upanaha*, *Agnikarma*, *Bandhan*, *Suchikarma (Viddhakarma)* and *Abhyantartaha Erandsnehapaana*. With the help of this treatment, we can correct the vitiation of *Vata* and can give relief to the patient<sup>3</sup>. The site of *Siravyadh*(Venepuncture) is two *angulas*(patient's own finger breadth) above from *kshipramarma* of foot (vital point in between the big toe and the indextoe), Medial Metatarsal vein which is a branch of dorsal venous arch of foot is there. Butterfly cannula is to be used to puncture the vein. *Siravyadh* is to be done till bloodletting is stopped by itself or upto maximum quantity of 30ml.<sup>4,5</sup>

### AIMS & OBJECTIVES:

To prove the efficacy of both the procedures

To collect and correlate ayurvedic management of *Vatakantaka* from different ayurvedic texts.

A comparative study of *Agni karma* and *Sira-Vyadha* in the management of *Vatakantaka*.

### RESEARCH QUESTION:

Is there any difference between the efficacy of *Agnikarma* and *Siravyadha* in the management of *Vatakantaka*?

### HYPOTHESIS:

□ **Null Hypothesis (H<sub>0</sub>)**

There is no difference in efficacy of *Agnikarma* & *Siravyadha* in the management of *Vatakantaka*.

□ **Alternative Hypothesis (H<sub>1</sub>)**

There is difference in efficacy of *Agnikarma* & *Siravyadha* in the management of *Vatakantaka*.

### MATERIAL AND METHODS

**Study type:** interventional

**Masking:** open trial

**Study Setting:** this will be conducted in SKGAC&H, Kurukshetra, Haryana.

**INCLUSION CRITERIA:**

- a) Patients with *pratyatmalakshanas* of *vatakantaka* i.e, pain in the heel region with or without local swelling, stiffness and tenderness.
- b) Irrespective of sex.
- c) Age group between 20-60yrs

**EXCLUSION CRITERIA:**

- a) Calcaneal stress fracture, RA, gout, neoplastic condition, nerve entrapment syndromes.
- b) Subjects with impaired circulation to lower extremities.
- c) Subjects with referred pain due to sciatica & other neurological disorders.
- d) Corticosteroid injections to heel, preceding 3 months.

**METHODOLOGY:**

**GROUP A**

The process by which *samyak dagdha vrana* is generated for therapeutic purpose to through the assistance of various *drvyas* by *agni* is referred to as *agnikarma*. The method of *Agnikarma* will be applied in this study is *Bindu* over the area of maximum tenderness with *Panchdhatu Shalaka* on 0, 7, 14th day.

**GROUP B**

In the selected patients 3 sittings of *Siravyadhchikitsa* (Venepuncture treatment) is to be done on 0, 7 & 14<sup>th</sup> day. Changes in the pain, tenderness and swelling are to be observed on 7th day, 14th day, 21st days. The site of *Siravyadh* (venepuncture) is two *angulas* (patient's own finger breadth) above from *kshipramarma* of foot (vital point in between the big toe and the index toe), Medial

Metatarsal vein which is a branch of dorsal venous arch of foot is there. Butterfly cannula is to be used to puncture the vein. *Siravyadh* is to be done till bleeding is stopped by itself or maximum quantity upto 30ml.

A total of 60 patients of *Vatakantaka* will be included for the study. The patients will be randomly distributed in 2 groups namely Group A & Group B.

### **POORVA KARMA**

- Written informed consent will be taken as it is an important part of Any surgical or parasurgical procedure.
- Preparation of the local part: Heel area is cleaned with distilled water & wiped with dry sterilized gauze piece.
- Most painful sites are marked with marker.

### **PRADHAN KARMA**

- *Bindu* type of *PanchdhatuShalaka* will be used for this procedure. *Bindu* end of *Shalaka* will be placed on the site of heel pain . After heat sensation, *Shalaka* will be removed & placed on the other site of pain & tenderness.<sup>6</sup>

### **PASHCHAT KARMA**

- Immediately after *Agnikarma*, aloe vera pulp will be applied on the site of *Agnikarma* to avoid burning scar & other adverse effects.
- The patient is advised to avoid dietary regimen which aggravates *VataKapha*.

### **PROCEDURE FOR SIRAVYADHA:**

#### **POORVA KARMA**

1. Written informed consent of patients is taken.
2. Then routine investigation and fitness test of each patient is carried out.
3. BP apparatus, scalp vein set of appropriate calibre & dressing materials are kept ready beforehand.

4. *Abhyanga* with *TilaTaila* & *NadiSvedana* is done before *Siravyadha*.

### **PRADHAN KARMA**

1. Patient is preferably seated on a couch and the affected foot is placed on a stool below.
2. Cuff of BP apparatus applied over the affected leg and inflated to make the veins prominent and engorged.
3. *Siravyadha* (venepuncture) is done with the help of suitable scalp vein set from the foot region of affected leg at two *Angula* (finger) above the *Kshipramarma*. Medial metatarsal vein which is a branch of dorsal venous arch of foot is there.
4. *Siravyadha* is done till bleeding is stopped by itself or maximum of 30ml of blood is drained out.
5. Continuous observation is made for any *Marmaghata* / shock or adverse effect.

### **PASHCHAT KARMA**

1. *Pattabandhan* is done at the *Siravyadha* site after completion of *Siravyadha* with application of *Haridra* and *Yasthimadhu* powder.
2. Bed rest is advised for at least half an hour after *Siravyadha*.
3. Light diet is allowed to take after one hour of *Siravyadha*.

### **DIAGNOSTIC CRITERIA:**

Purely clinical. Based on

Heel pain & stiffness as subjective parameter

Heel tenderness & swelling as objective parameter

### **Statistical Calculations:**

- Appropriate statistical methods will be used to analyze the data collected in the above observations & suitable conclusion drawn. This is a comparative study of *Agnikarma* and *Siravyadha* in the management of *Vatakantaka* with the help of statistician.

**INVESTIGATION:**

X-ray of affected heel AP & Lat view.

**CRITERIA FOR WITHDRAWAL:**

- Discontinuation of the treatment during trial by patient.
- Development of any complication.

**LABORATORY INVESTIGATION:**

- Blood routine test – TLC, DLC, ESR, HB% , BT, CT, PT, S.URIC ACID , RA FACTOR
- Blood Sugar Fasting & Post prandial
- Urine Examination – Routine & Microscopic
- HIV, HBsAg , HCV

**ASSESSMENT CRITERIA:**

The improvement in the patient is assessed mainly on the basis of relief in the cardinal signs & symptoms of the disease and will be scored as under by the Visual Analogue Scale (VAS).

**Signs and symptoms were scored 0,1,2,3.**

a) **Heelpain:**

No pain 0

Mild discomfort 1 Distressing pain 2

Severe excruciating pain 3

**Local tenderness:**

No tenderness- 0

Mild tenderness-1

Moderate tenderness –2

**Severe tenderness 3**

b) **Local swelling:** No swelling 0 Mild swelling 1

Moderate swelling 2 Profuse swelling 3

c) **Local stiffness:** No stiffness 0 Mild stiffness 1

Moderate stiffness 2 Severe stiffness 3

## DATA MANAGEMENT-

Data coding will be done by Principal investigators.

## ETHICS AND DISSEMINATION –

Research ethical approval, after critical evaluation and presentation to the ethical committee, has been taken on the research topic No.CTRI/2023/02/049606

## Consent and assessment

Subjects will be given detailed information regarding their treatment in their own language. Then written and informed consent will be taken from patients before starting the study.

## DISSEMINATION POLICY-

Will be in the form of paper publication, presentation and monograph.

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