



**EFFICACY OF BHALLATAKA AGNIKARMA IN VATKANTAKA  
(CALCANEAL SPUR) - A CASE STUDY**

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**ABSTRACT**

*Agnikarma* is an important para surgical procedure emerged as an integral part of the Ayurvedic therapeutics. *Agnikarma* is application of heat to a particular part of the body by raising local body temperature causing dilatation of local blood vessels which increases tissue perfusion, excretes the metabolic waste reduces the *shotha* (inflammation) and hence the pain resulted by the *shotha*. *Agnikarma* is superior then *Ksharkarma* as the disease treated by *Agnikarma* never happen again. 46 years traffic police officer with calcaneal spur was diagnosed on x-ray with severe pain and difficulty in walking was treated with *Bhallatak Agnikarma*. It is one of the effective and cheapest line of management on opd basis with instant results shown. Patient showed significant relief after *Agnikarma*. As the calcaneal spur is bony overgrowth from the calcaneal tuberosity which occurs when foot exposed to a constant strain leads to calcium deposition in the heel bone. In Ayurveda, Calcaneal spur correlate with ‘*Asthimajjagat Vata*’ and ‘*Vatakantaka*’ .It is one of the *Vatavyadhi* which occurs in *gulfa sandhi* region; Caused due to excessive walking or walking on irregular surfaces, excessive pressure exerted over ankle region. This causes vat to accumulate in ankle region (*Vat Prakop –Sthansanshraya*). It is characterised by *Shool* (pain) at heel region. In Ayurveda, the pain is due to *Vat Dosha* and in *Vatakantaka*, *Vata* and *Kapha* both are responsible for the disease pathology. And this *Vat-Kapha Dushti* can be effectively treated by *Agnikarma*.

**Key Words:** *Agnikarma*, Calcaneal Spur, Heel spur, *Bhallataka Agnikarma*, *Vatakantaka*

**INTRODUCTION:** The Calcaneous is largest tarsal bone. It forms the prominence of the heel<sup>1</sup>. As the modern lifestyle demands being active for long hours results in pain in heels in many people; And the main cause of such pain is the ,‘Calcaneal Spur’, which can be correlate with ‘*Vatakantaka*’ and ‘*Asthimajjagat Vata*’ in Ayurveda<sup>2</sup>. Heel

spur occur when calcium deposit build up on underside of the heel bone, a process that usually occurs over a period of many months<sup>3</sup>. Heel spur are often caused by strains on foot muscles and ligaments, stretching of the planter fascia and repeated tearing of membrane that covers the heel bone. Heel spur are especially common among middle age. Along with

this, the most common aetiology is thought to be abnormal pronation which results in increased tension forces within the structures that attach in the region of calcaneal tuberosity.

Calcaneal spur can be located at the back of the heel (dorsal heel spur) or under the sole (planter heel spur). The apex of spur lies either within the origin of the planter fascia (on the medial tubercle of the calcaneous) or superior to it (in the origin of flexor digitorum brevis muscle)<sup>4</sup>. This gives idea for the place for *Agnikarma* should be performed.

As the main complaints of the patient are pain around heel region which is aggravated on excessive walking, weight bearing, running. In some cases, the patient can't bear his own weight and unable to move<sup>5</sup>. According to *Aacharya Sushrut*, That the disease which is not cured by *Aushadhi*, *ksharkarma*, *Shastrakarma* can be treated with *Agnikarma*; and the diseases which are treated by *Agnikarma* never reoccur<sup>6</sup>. And both *dushta Vata* and *Kapha Doshas* are responsible for the *samprapti* of *Vatakantaka*; which are effectively treated by *Agnikarma*<sup>7</sup>.

So this *Agnikarma* is done by various methods as mentioned below<sup>8</sup>-

A. According to *Dravya*

- 1) *Snigdha* – done by using honey, oil etc
- 2) *Ruksha* – done by using *shalakha*, *godanta* etc

B. According to metal used

Done by using *Suvarna* (gold), *Rajat* (silver), *Loh* (iron), *Tamra* (copper), *Kansya* (Bronze), *Panchadhatu* etc.

C. According to *Sthanbheda*

- 1) *Sthanik*- Done in corn etc
- 2) *Sthanantariy*- sciatica etc

D. According To *Dahanvishesh*<sup>9</sup>

- 1) *Valay*
- 2) *Bindu*
- 3) *Vilekha*
- 4) *Pratisaran*
- 5) *Ardhachandrakar*
- 6) *swastika*
- 7) *Ashtapad*

So this *Bhallataka Agnikarma* in *Vatakantaka* can be classified as *Snigdha Bindu Agnikarma*.

## OBJECTIVES

To study the effect of *Bhallataka Agnikarma* on *Vatakantaka* (Calcaneal Spur).

## MATERIAL AND METHODS

### MATERIAL

- Normal saline and Cotton
- *Agnikarma Shalakha*
- *Bhallataka*
- Wheat Flour (After application)
- Gas Burner

### METHODS

The procedure is performed in three stages as *Purva*, *Pradhan* and *Pashchat Karma*.

### CASE STUDY

Age- 46 years Sex – Male  
Occupation- Traffic Police Officer OPD NO:-21658

### CHIEF COMPLAINTS

- 1) Pain at Rt. Heel 4 months
- 2) Pain increases after period of rest 4 months
- 3) Difficulty in walking 4 months
- 4) Can't bear his own weight 4 months

### History of present illness

A 46 years old Male, Traffic Police Officer having complaints of pain in right heel region, difficulty to walk and can't bear his own weight since nearly 4 months without any systemic illness as confirmed by various tests. Initially the patient developed pain in right heel which was bearable by the patient as the time passes pain increases and gradually increases after period of rest and mostly aggravated

after standing for a long time as the professional demand. Patient took analgesic to relieve pain but was not completely relieved. So patient visited some allopathy practitioners, they advised him for surgical management but the patient was not willing for surgical intervention; hence came here for Ayurveda treatment at RJVS Bhaisaheb Sawant Ayurveda College, Sawantwadi. (OPD No. 21658)

#### Family History

Not any

#### History of Blood Transfusion

Not any

History of Past and Present Medicine

Tab. Diclofenac.50 mg SOS for first month then 1 BD

#### Personal History

Not significant

Bowel and Bladder Habit – Normal

#### General Examination-

GC- Good Temp. – Afebrile BP- 140/80 mm of Hg P- 64/min

#### Systemic Examination

RS- AEBE Clear

CVS- S1S2 Normal

CNS- Conscious and Oriented

#### Ashtavidha Pariksha

01. <i>NADI</i> :-	<i>Gati</i> - <i>Hansa</i>
Rate/Min – 76/min	<i>Dosha</i> – <i>Kapha</i>
02. <i>MUTRA</i> :-	Quantity - <i>Prakrit</i>
Colour – <i>Pitvarni</i>	Frequency – 4-5 times/ day
03. <i>MALA</i> :-	Quantity- <i>Prakrit</i>
Colour – <i>Pitvarni</i>	Frequency – 1 time/day
Consistency- Semi solid	
04. <i>JIVHA</i> :-	Colour – <i>Alpa Raktabh</i>
Nature – <i>Niram</i>	
05. <i>SHABDA</i> :-	Nature of Voice – <i>Spashta</i>
06. <i>SPARSHA</i> :-	Nature – <i>Ruksha</i>
07. <i>DRIKA</i> :-	Colour of Eyes – <i>Shwetabh</i> Nature – <i>Snigdha</i> Eye Sight- Normal
08. <i>AAKRITI</i> :-	<i>Madhyam</i>

**Table no 1 (Dashavidha Pariksha)**

Examination of strength of patient/ <i>Rugna bala</i>	Examination of strength of disease/ <i>Vyadhi bala</i>
1. <i>Prakriti</i> - <i>Sharir</i> - <i>Kaphapradhan Vata</i> <i>Manas</i> - <i>Rajas</i>	2. <i>Vikriti Pariksha</i> - <i>Sandhishul</i>
3. <i>Sar</i> - <i>Madhyam</i>	4. <i>Sattva</i> - <i>Madhyam</i>
5. <i>Samhanan</i> - <i>Uttam</i>	6. <i>Aaharshakti</i> - <i>Uttam</i>
7. <i>Praman</i> - <i>Prakrit</i>	8. <i>Vyayamshakti</i> - <i>Madhyam</i>
9. <i>Satmya</i> - <i>Mansahar and Shakahar</i>	10. <i>Vaya</i> - <i>Madyamavastha</i>
<i>Rugnabala</i> :- <i>Pravar</i>	<i>Vyadhibala</i> :- <i>Pravar</i>

#### Local Examination of Rt. Heel

Tenderness- Positive

Appearance- Normal- No any redness and deformity noticed

Swelling –Negative

#### Laboratory Investigation

- 1)Sr Creatinine- 0.8mg/dl
- 2)Sr. Uric Acid- 03.0mg/dl
- 3) Sr. Calcium-14.0mg/dl
- 4) BSL

Fasting blood sugar- 100.0mg/dl

PP-120.0mg/dl

5)RA Factor- Negative

6) X-ray

Rt. Planter heel spur noticed

#### TREATMENT

The diagnosis was confirmed on the basis of sign- symptoms and x-ray findings.

Patient is treated with *Bhallataka Agnikarma* by *bindu* method. One sitting

of *Bhallataka Agnikarma* was given to the patient on maximum site of tenderness. And the follow up was taken after 15 days.

#### **PROCEDURE (PURVAKARMA)**

- 1) Patient consent was taken before the *Agnikarma*.
- 2) Maximum tenderness point is selected.



**Fig. No. 01.** Agnikarma Yantra, Wheat Flour, *Bhallataka* **Fig. No. 02.** *Bhallataka* put on fire

#### **PRADHANKARM**

- 1) Once the oil start dipping from the *Bhallataka*, The flat surface of *Bhallataka* is placed over the place of maximum tenderness point of the Rt. Heel.
- 2) *Bhallataka* should be hold on skin till the *Samyak dagdha lakshan* appears, approx. For 4 to 6 seconds. Then *Bhallataka* is removed.



**Fig. No. 03.** Hot *Bhallataka* applied to the affected region **Fig. No. 04.** Wheat Flour is applied immediately after the procedure



#### **PASCHATKARMA**

- 1) After *Samyak Dagdha*, mixed wheat flour and gram flour is applied to reduce the burning sensation and greasiness of *Bhallataka* oil.
- 2) Vitals are checked again



**Fig. No. 05.** Wheat Flour is leave on the site for some time.

## RESULT AND DISCUSSION

Table No. 1 shows Pain Gradation<sup>10</sup>

Table No. 2 shows Sign and Symptoms before, after Agnikarma and on follow up.

**Table No.2 (Pain Analogue Scale)**

GRADE	No Pain	Mild Pain	Moderate Pain	Severe Pain
NO.	0	1-3	4-7	8-10

Assessment was done before, after and on follow up of the *Bhallataka Agnikarma* on the main basis of Relief of Pain, Pain after Rest, and Difficulty in Walking, Weight Bearing and Tenderness at Heel.

**Table no. 3 (Before and After Treatment Assessment)**

	Before <i>Agnikarma</i>	After <i>Agnikarma</i>
Pain at Rt. Heel	9	4
Pain after Rest	7	1
Difficulty in walking	7	3
Weight Bearing	6	1
Tenderness at Heel	9	3

After *Bhallataka Agnikarma*, Pain was partially relieved and completely relieved after 8 days; as the burn wound starts healing.

Similarly, Gradual decrease in other sign and symptoms was seen after 10 days of Agnikarma. According to Ayurveda, *Vatkantaka* (Calcaneal Spur) caused due to *Sthansanshraya* of *Dushta Prakupit Vata Dosha* along with *Kapha Dosha* (*Anubandh*)<sup>11</sup>; which is responsible for *shool* (Pain), *stambha* (Stiffness), and *shotha* (Inflammation). As per the Modern Science; The treatment of Calcaneal Spur includes various exercises, anti-inflammatory drugs and cortisone injections. If this Conservative Treatment

fails, then surgical interventions is necessary<sup>12</sup>; but The *Agnikarma* is the best answer for the *Vatakantaka* (Calcaneal Spur).

### **SAMYAK DAGDHA LAKSHAN**

As the *Bhallataka Agnikarma* involves *twak* and *mansa dhatu* only; so the *samyak dagdha lakshan* is different for *twak* and *mansadhatu*; mentioned below-

According. To Aacharya Sushrut<sup>13</sup>-

### **A)TWAK DHATUGAT SAMYAK DAGDHA LAKSHAN**

- 1)*Anavagadhranata* (Wound which is not deep).
- 2)*Suvyavasthit Vran* (Without elevation / depression).

3) *Talpahalvarnata* (Fruit of tala-blue-black).

4) *Durgandhata* (Bad odour).

5) *twak sankoch* ( Contraction of skin).

## **B)MANSA DHATUGAT SAMYAK DAGDHA LAKSHAN**

1) *Kapot varnata* (Ashy colour).

2) *Alpa shwayathu* (Mild Swelling).

3) *Alpa vedana* (Less Pain).

4) *Shushka sankuchit vran* (Contracted wound).

Acc. To Aacharya Vaghbata<sup>14</sup>

1) *Shabdapradurbhav*

2) *Pakwatalkapotabhvarna* 3) *Lasikavant*

4) *Suroh* (*Shighra rohan*) 5) *Nativvedana* (*Alpa vedana*) etc.

## **MODE OF ACTION OF BHALLATAKA AGNIKARMA**

A) Generally after *Samyak Dagdh* formation of blisters are expected. This *dagdha* affects the *Sira* and *Kandara* which are the *Upadhatu* of *Rakta Dhatu* ; Results in excretion of *dosha* from *Rakta* (blood) especially from *Yakruta* (Liver) and *Pliha* (Pancreas) which is the *Mulasthan* of *Raktavaha Strotasa* through this *Upadhatu* i.e. (*Sira* and *Kandara*) and skin<sup>15</sup>.

B) Strong superficial heating procedure has been observed to have potential to relieving pain due to its counter irritation effect. It has been suggested that pain may be possibly as a result of the accumulation of metabolic waste product in the tissue and an increased flow of blood in the region is the possible mechanism that is responsible to remove these substances and relieve pain. Another possibility is that the pain releasing mechanism is associate with muscle relaxation<sup>16</sup>. Pain due to acute inflammation or recent injury is relieved more efficiently by mild heat . When pain is long standing or of chronic type; heating

temperature may be increased upto 360 ° C.

This can be explained by Burn healing physiology- Inflammation (Reactive), Proliferative (Reparative) and Maturation (Remodelling) constitute the three phases in wound healing<sup>17</sup>.

1) Inflammatory phase- Inflammatory response of body begins which has vascular and cellular components

a) Vascular Response- Immediately after burns there is a local vasodilatation with extravasations of fluid in the third space.

b) Cellular Response- Neutrophils and Monocytes are the first cell to migrate at the site of inflammation. Later on neutrophils start declining and are replaced by macrophages. The migration of these cells is initiated by chemotactic factors like Kallkireins and Fibrin peptides released from coagulation process and substances released from the mast cells like tumour necrosis factor, histamines, proteases, leukotreins and cytokines. Cellular response helps in phagocytosis and cleaning of dead tissue and toxins released by burnt tissue.

### **2) PROLIFERATIVE PHASE-**

In partial thickness burns re-epithelialization starts in the form of keratinocytes migration from viable skin appendages in dermis few hours after injury ,this usually covers the wound within 5-7 days .After re-epithelialization the basement membrane zones forms between dermis and epidermis .Angiogenesis and Fibrogenesis help in dermal reconstruction .

### **3) REMODELLING PHASE-**

Remodelling phase is the third phase of healing wherein the maturation of graft or scar takes place. In this final phase of wound healing initially there is laying down of fibrous structural protein i.e.; collagen and elastin around epithelial,

endothelial and smooth muscle as extra cellular matrix. Later on resolution phase this extracellular matrix remodels into scar tissue and fibroblast become myofibroblast phenotype which is responsible for scar contraction.

This whole process of burn wound healing explains the counter irritation mechanism and pain relief.

C) In this, *Agni* is introduced to the affected area by hot oil and surface of *Bhallataka*. As the *Bhallataka* have *Laghu*, *Ushna*, *Tikshna* properties<sup>18</sup>; it's *Ushna* and *Tikshna* properties leads to the *Vatkaphashaman*; helps to breaks the pathogenesis (*Sampraptibhanga*) of *Vatakantaka*. And as all oils considered as *Guru guna* pacifies the *Laghu guna* of *Vata Dosha*. The *Ushna guna* of both *Bhallataka* and *Agni* pacifies the *Shita guna* of both *Vata* and *Kapha dosha* and reduces pain, decreases /reduces the *Kaphanubandha* leads to the reduction of *shotha*.

## CONCLUSION

*Bhallataka Agnikarma* is very effective treatment in *Vatakantaka* (Calcaneal Spur). This procedure is easy to perform, Cheap (cost effective), can be performed in OPD basis without any big setup. And have less chances of recurrence because *Agnikarma Chikitsa* is mainly used for *Sthanik Vyadhi*. *Ushna guna* of *Agni* as well as *Bhallataka* is the main factor of this treatment. So it is mainly used in *Vata* and *Kaphajanya vyadhi* because both *Vata* and *Kapha Dosha* have *Shita guna* in common. So for *chikitsa* (*Sampraptibhanga*); opposite *Ushna guna* is used to pacify the *Shita Guna*. This *Ushna Guna* is also responsible for *Aampachan*<sup>19</sup>; by its *Aampachana karma* and *Vatakapha Shaman Strotorodh* was decreased and *Niram (Prakrit)* *Vat* and

*Kapha* returns to its natural places; So its helps in *Samul nash* of the *vyadhi*.

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