



**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 Calcaneus is largest tarsal bone. It forms the prominence of the heel¹. 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 Ayurveda². Heel

spur occur when calcium deposit build up on underside of the heel bone, a process that usually occurs over a period of many months³. 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)⁴. 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 move⁵. 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 reoccur⁶. And both *dushta Vata* and *Kapha Doshas* are responsible for the *samprapti* of *Vatakantaka*; which are effectively treated by *Agnikarma*⁷.

So this *Agnikarma* is done by various methods as mentioned below⁸-

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*⁹

- 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. NADI:- Gati - Hansa
Rate/Min – 76/min Dosha – Kapha

02. MUTRA:- Quantity - Prakrit
Colour – Pitvarni Frequency– 4-5
times/ day

03. MALA:- Quantity- Prakrit
Colour – Pitvarni Frequency – 1
time/day

Consistency- Semi solid

04. JIVHA:- Colour – Alpa Raktabh
Nature – Niram

05. SHABDA:- Nature of Voice – Spashta

06. SPARSHA:- Nature – Ruksha

07. DRIKA:- Colour of Eyes –
Shwetabh Nature – Snigdha Eye Sight-
Normal

08. AAKRITI:- Madhyam

Table no 1 (Dashavidha Pariksha)

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

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.



- 3) The selected site was cleaned with normal saline.
- 4) Single *Bhallataka* of superior quality was chosen for the procedure and with the help of tongs is put on fire.
- 5) Vitals are checked.



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 Gradation¹⁰

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*, *Vatakantaka* (Calcaneal Spur) caused due to *Sthansanshraya* of *Dushta Prakupit Vata Dosha* along with *Kapha Dosha* (*Anubandh*)¹¹; 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 necessary¹²; 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 Sushrut¹³-

A)TWAK DHATUGAT SAMYAK DAGDHA LAKSHAN

1) *Anavagadhvrnata* (Wound which is not deep).

2) *Suvyavasthit Vran* (Without elevation / depression).

3) *Talphalvarnata* (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 Vagbhata*¹⁴

1) *Shabdapradurbhav*

2) *Pakwatakapotabhvarna* 3) *Lasikavant*

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

MODE OF ACTION OF BHALLATAKA AGNIKARMA

A) Generally after *Samyak Dagdha* 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 skin¹⁵.

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 relaxation¹⁶. 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 360⁰ C.

This can be explained by Burn healing physiology- Inflammation (Reactive), Proliferative (Reparative) and Maturation (Remodelling) constitute the three phases in wound healing¹⁷.

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 Kallikreins and Fibrin peptides released from coagulation process and substances released from the mast cells like tumour necrosis factor, histamines, proteases, leukotrienes 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-epithelization 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-epithelization 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 properties¹⁸; 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 Aampachan¹⁹; 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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