

**A REVIEW ON COMPARATIVE CLINICAL STUDY OF  
VATAKANTAKA W.S.R PLANTAR FASCITIS**

<sup>1</sup>\*Dr. Shanmukhappa V. Irannanavar, <sup>2</sup>Dr. Sachin N. Patil and <sup>3</sup>Dr. Rashmi V.

<sup>1</sup>Part Time Ph.D. Scholar, MS (Ayu) Assistant Professor, Amrutha Ayurvedic Medical College, Chitradurga, Karnataka.

<sup>2</sup>Professor and HOD, Department of Shalyatantra, SSRAV College. Inchal Karnataka.

<sup>3</sup>Professor, Department of Roganidana, Sushruta Institute of Ayurvedic Medical Science and Research Center Davanagere, Karnataka.

**ABSTRACT**

Agni Karma is an important Anushastra Karma (Parasurgical Procedure), elaborately described in Sushruta Samhita. Sushruta hails this procedure as the best and most important procedure. While elaborating the benefits of this procedure he mentions that the procedure is easy to perform, it cures many incurable diseases and there will be no recurrence of the disease. Agnikarma is indicated in many diseases including severe pain in asthi and Sandhi Pradesh. Agnikarma procedure relieves pain instantly. Vatakantaka is a VataPradhanaVyadhi particularly caused by walking on uneven surfaces or by AtiShrama, which produces Ruja in khadulapradesha (Paarshni or Padajangha sandhi). Except Charaka Acharya all Bhruhatrayi's and Laghutrayi's have accepted Vatakantaka as VataNanatmajaVyadhi. The treatment of Vatakantaka involves Raktamokshana, Erandatailapana and Agnikarma. The features of Vatakantaka have similarity with Plantar fasciitis. Plantar fasciitis is

the inflammation of the plantar fascia due to repeated trauma to the tissue where it is attaches to the calcaneus. This conditions produce severe pain in the Heel while walking. The life of the sufferer becomes more miserable. The patient wants to get rid of pain by any means or methods. In today's modernized world the incidence of Vatakantaka i.e. Plantar fasciitis is common problem and it is increasing because of overweight and use of wearing high heeled & hard foot wears, improperly fitting footwear's, exposure to excessive cold, walking long

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**\*Corresponding Author**

**Dr. Shanmukhappa V.  
Irannanavar**

Part Time Ph.D. Scholar,  
MS (Ayu) Assistant  
Professor, Amrutha  
Ayurvedic Medical College,  
Chitradurga, Karnataka.

distance, Engaging in strenuous exercise (especially jumping and running) and Standing for prolonged periods. Consumption of fastfood offers less nutrition to the muscle and bone. Men and women are equally affected. Thus it is seen as wide spreading disease condition during these days, found in the people from all walks of life. Plantar fasciitis is estimated to affect 1 in 10 people at some point during their lifetime and most commonly affects between 20- 60 of age. In modern medicine, Plantar fasciitis is treated with NSAIDs, local corticosteroids and Surgery. Supportive treatment includes changing the life styles, like use of appropriate footwear and by adopting foot- care habits. Shoes with adequate arch support are also advised. Patient is asked to avoid sudden turns that put great stress on the ligaments, running on hard surface etc. Injections of corticosteroids will sometimes reduce pain dramatically but the effects will only be temporary. Prolonged use of NSAIDs has ill effects such as gastritis etc. There are some potential postoperative complications of surgery which include recurrent heel pain, permanent local numbness, painful nerve entrapment, wound dehiscence, infections and hypertrophic scar. To overcome these draw backs of Modern medicine. The present clinical study entitled. ‘A COMPARATIVE CLINICAL STUDY ON AGNIKARMA BY PANCHALOHA SHALAKA AND ELECTRIC CAUTERY IN THE MANAGEMENT OF VATAKANTAKA W.S.R PLANTAR FASCITIS’ is undertaken. In the present study, patients suffering from Vatakantaka will be selected and Ayurvedic line of treatment is adopted. In Vatakantaka Binduprakara of Agnikarma with PanchalohaShalaka for one group and electrical cautery for another group is undertaken for the study. Shatadhoutagritha externally applied at the site for both groups. Internally GandhakaRasayana 1 t.i.d. will be given daily to all patients as a shamanachikitsa. GandhakaRasayana is known to be best antimicrobial and antiinfectant properties. So it is useful in Vatakantaka. After the Agnikarma. Observation of the patients will be carried out based on parameters like pain, swelling, and tenderness. Considering all the above points the present clinical trial is chosen to evaluate the efficacy of Agnikarma with PanchalohaShalaka and Electric cautery along with GandhakaRasayana internally to evolve a simple, safe and cost effective treatment in the management of Vatakantaka.

#### **a. Review of literature**

Review of literature will be done as per the topics and references mentioned below;

- Nidana, Samprapti, Laxana of Vatakantaka as described in<sup>[1,2,3,4,5]</sup>
- Review of plantar fasciitis as described in<sup>[6,7]</sup>
- Management of Vatakantaka as described in,<sup>[8,9,10]</sup>

- Review of Agnikarma as described in<sup>[11]</sup>
- Review of Gandhakarasyana as described in<sup>[12]</sup>
- Review of Shatadhoutagritha as described in<sup>[13]</sup>

### **b. Research question**

Whether Agnikarmawith PanchalohaShalakais more effective or electric cautery in the management of Vatakantaka?

### **Hypothesis**

Ho –Both agnikarma with panchalohashalaka and electric cautery are not effective.

H1 \_ agnikarmawith panchalohashalaka is more effective.

H2 \_ agnikarmawith electric cautery is more effective.

### **c. Objective of the study**

The present clinical study is undertaken to establish the following objectives

1. To review and analyze available literature of Vatakantaka in Ayurvedic science.
2. To review and analyze available literature of Plantar Fasciitis as described in Modern science.
3. To assess the efficacy of Agnikarma by PanchalohaShalaka in the management of Vatakantaka.
4. To assess the efficacy of Agnikarma by Electric cautery in the management of Vatakantaka.
5. To assess the comparative efficacy of Agnikarma by PanchalohaShalaka and Electric cautery in Vatakantaka.

### **d. MATERIAL AND METHODS**

In this present study the following materials are used for the purpose as mentioned below

Panchalohashalaka - To perform agnikarma

Electrical cautery. - To perform agnikarma

Gandhakarasyana - As an internal medication

Shatadhoutagritha - For local application after Agnikarma

### **i) Source of data**

Patients attending OPD and IPD of Post Graduate Department of ShalyaTantra, Sri J. G. Co-Operative Hospital, Ghataprabha will be selected for trial.

**ii) Method of collection of data**

1. Patients attending Opd and ipd of post graduate department of shalyatantra, sri j g co-operative hospital societysayurvedic medical college and hospital, ghataprabha who are fit for study as per the inclusion criteria will be selected randomly.
2. Patients will be registered and recorded in specially designed case sheet proforma.
3. Pain (vedana) will be analyzed based on “mcgill pain index” and patient self-assessment by “numerical rating scale”.
4. Required medicines will be prepared in the department of rasa shastra and bhaisajyakalpana, sri j g co-opertive hospital societysayurvedic medical college.

**Inclusion Criteria**

1. Patients presenting with clinical features of ‘Vatakantaka’.
2. Patients of either sex between the age group of 20 - 60 years

**Exclusion Criteria**

1. Patients with uncontrolled Diabetes & other systemic disorders.
2. Patients with Pregnancy.
3. Patients with Infective pathology
4. Patients with Fracture of calcaneum.
5. Patients of Vatakantaka due to secondary infection

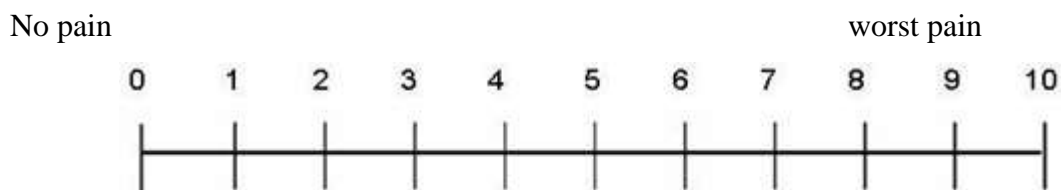
**Parameters of Study****• Subjective parameter****Pain**

Pain is assessed by McGill pain score index and Numerical Rating Scale Score.

- 0 - None
- 1 - Mild
- 2 - Discomforting
- 3 - Distressing
- 4 - Horrible
- 5 - Excruciating

**Numerical Rating Scale Score**

Pain will be assessed on the basis of visual analogue scale



The patient is shown the scale above. They are asked to indicate which number equates to the pain they feel.

- **Objective parameter**

### **Tenderness**

#### **Soft Tissue Tenderness Grading Scheme**

<b>GRADE</b>	<b>DEFINITION</b>
0	No tenderness
1	Tenderness to palpation <b>WITHOUT</b> grimace or flinch
2	Tenderness <b>WITH</b> grimace &/or flinch to palpation
3	Tenderness with <b>WITHDRAWAL</b> (+ "Jump Sign")
4	Withdrawal (+ "Jump Sign") to non-noxious stimuli (ie. superficial palpation, pin prick, gentle percussion)

### **Swelling**

If any swelling will be measured in terms of following numerical rating scale

0 - Absent

1 - Present

**Study Design:** Comparative Clinical study.

**Sample size:** Minimum of 100 cases diagnosed as 'Vatakantaka' will be selected incidentally and randomly categorized into two groups consisting 50 patients in each group.

☐ Group – A:

- Sample size : Minimum of 50 patients
- Locally : Agnikarma with Panchlohashalaka
- Sitzings : 2 sittings, [2nd will be given if in case of persisting of symptom at the interval of 1 month.)
- Internally : Gandhakarasayana with ushnajala/ dugda
- Dose : 1 tab.three times a day after agnikarma
- Duration : 7 days
- Follow up : 3 Months

☐ Group – B:

- Sample size : Minimum of 50 patients
- Locally : Agnikarma with electric cautery
- Sitzings : 2 sittings, [2nd will be given if in case of persisting of symptom at the interval of 1 month.)
- Internally : Gandhakarasayana with ushnajala/ dugda
- Dose : 1 tab.three times a day after agnikarma.
- Duration : 7 days
- Follow up : 3 Months

### Panchalohashalaka

Specially designed PanchaLohaShalaka has been prepared for performing Agni Karma. Panchalohashalaka is not mentioned in any of the original Ayurvedic texts. Dr.P.D.Gupta has worked a lot on Agni karma and he in his book “Agni-Karma- Technological Innovations” (Treatment by Therapeutic Burning), has detailed the composition of Panchaloha in preparation of PanchalohaShalaka. PanchaLohaShalaka was prepared by mixing of the five metals in the following quantity and percentage.

### Composition of panchalohashalaka

Metals	Weight	Percentage
Tamra	20gms	40%
Loha	15gms	30%
Rajat	5gms	10%
Yashada	5gms	10%
Vanga	5gms	10%
Total	50gms	100%

### Electric Cautery

- An Electro cautery consists of a platinum wire loop or point which becomes red hot when a current passed through it by an electrode. Time taken for Electric Cautery to become red-hot is 6 seconds. The maximum temperature attained by the probe, when it was red hot was 143<sup>0</sup>C. The temperature of probe falls rapidly, the red-hot temperature of 143<sup>0</sup>c felt to 110<sup>0</sup>C in 5 seconds. At the end of 100 seconds (1 minute 40 seconds) the temperature of Probe was felt to around 32<sup>0</sup>C (Room temperature)

**Drug review****GANDHAKA RASAYANA**

showing composition of Gandhakarasyana

SL.NO.	DRUGS	QUANTITY
1	Shodithgandhaka	1 part
2	Godugda	S. Q.
3	Goghrit	S.Q.
4	Twak	1 part
5	Ela	1 part
6	Patra	1 part
7	Nagakeshara	1 part
8	Amalaki	1 part
9	haritaki	1 part
10	Bibhitaki	1 part
11	Adraka	1 part
12	guduchi	1 part
13	Bringaraj	1 part
14	Shunti	1 part
15	Sharkara	Equal quantity

**Method of preparation of GandhakaRasayana**

Suddhagandhaka[purified sulphur] was subjected to bhavana [trituration] incow's milk for 8 times, then further processed in chaturjatakawatha [combination of twak, ela, patra, nagakeshara] followed by bhavana in guduciswarasa afterwards in triphalakwatha [combination of haritaki, bibhitaki, amalaki] sunthikwatha, bhringarajaswarasa and 8 bhavanas with ardrakaswarasa. Thus prepared compound is Gandhakarasyana and should be combined with equal quantity of kandasharkara and preserved in a bottle

**Dosage:** - 4 to 8 ratti (500mg 1 Cap tid.)

**Anupana:** - Ushna Jala / Dugda

**Shatadouthagritha**

**Ingredients:** Goghruta & Water

**Preparation of Shatadhaut Ghruta:** Goghruta is washed 100 times by water methodologically to obtained Shatadhautaghruta. Goghruta is taken in kansyapatra and water is added double the quantity of ghruta and continuously mardan is done until water become oily, water is discarded and again fresh water is added and same procedure repeated for 100 times.

**Dosage:** As required for local application.

**Assessment criteria**

Criteria of Assessment was based on Total symptom score of subjective and objective parameter before and after the treatment. Findings were subjected for statistical analysis.

The results were categorized as,

1. Complete relief - 100%
2. Marked relief - Above 75%
3. Moderate relief - 50-75%
4. Mild relief - 25-50%
5. No relief - Below 25%

**Blood tests:** Hb%, Total count, Differential count, ESR, Random blood sugar

**Urine test:** Sugar, Albumin, Microscopic

**‘X’ Ray of Ankle joint:** antero - posterior and lateral view.

**Intervention:** Agni Karma by Panchaloha Shalaka and Electric Cautery

**Poorva Karma**

1. Consent of the patient to be taken
2. Snehana with tila taila
3. Swedana with ushna jala
4. Local area wash with antiseptic solution
5. Local anaesthesia 2% xylocaine if necessary

**Pradhan karma**

1. Most tender site is elicited.
2. PanchalohaShalaka is made red hot.
3. Bindu vat dahana is done at the most tender site.
4. Shatadhoutagritha is applied over the dagda vrana.
5. Same procedure is repeated by using red hot probe of electric cautery.

**Paschata karma**

1. Shatadhoutagritha is applied over the dagdavrana.
2. Gandhakarasayana 1 tid with ushnajala /dugda.



## 6.2 LIST OF REFERENCES

1. Vagbhata, AstangaHridayam, Nidanasthana with commentaries Sarvangasundara of Arunadatta and Ayurveda Rasayana of Hemadri, Edited by Pt. Bhisagacarya Harishastri Paradkar Vaidya, Akola, Krishnadas Academy, Varanasi, 535, Ch.15/Sloka53, 2000; 956.
2. Sri Madavakara, MadhavaNidanam with Madhukoshasanskrit commentary by Sri Vijayarakshitha and Srikanthadatta with Vidyotini Hindi commentary by Sri Sudarshan Shastri. Edited by YadunandanaUpadhyaya, Part First, Chaukhambha Sanskrit Sansthan, Varanasi, 442, Ch.22/Sloka 61, 520, 1988.
3. Bhavamishra, Bhava Prakasha Vol II English Translation by K. R .Srikantha Murthy, ChaukhambhaKrishnadas Academy, Varanasi, Madhyamakhand, Page No 316 Ch. 24/ Sloka9, Page No 335 Ch. 24/ Sloka 160, 161, 884, 2005.
4. Vangasena, Hindi commentary by Kaviraj Shri Shaligramaji Vaisya, Edited by Shri Vaidya Shankarlalaji Jain, KhemrajShreekrishnadasPrakasan, Bombay, Page No 333-334, Vatavyadhikara Sloka131,132,139,140, 1096, 1996.
5. Sushruta, Sushruta Samhita, Nidanasthana with Nibandhasangraha of Sri Dalhanacarya and NyayacandrikaPanjika of Gayadasacarya on Nidanasthana, Edited by Vaidya YadavjiTrikamjiAcarya and Narayan Ram Acarya “Kavyatirtha”, Krishnadas Academy, Varanasi, 269, Ch.1/Sloka79, 824, 1998.
6. A Manual on clinical Surgery including special investigations and differential diagnosis, Edited by Dr. S. Das, Published by Dr. S. Das, Calcutta, Page No248, Examination of the Foot, Ch. 21st, Pp469, 4<sup>th</sup> Edition., 1996.
7. Baily and Loves Short Practice of Surgery, published by ELBS imprints, 22 nd edition and Edited by Charles. V. Mann, R.C.G. Russel, Norman S. Williams, 325,340 Pp1041, 1995.
8. Bhavamishra, Bhava Prakasha Vol II English Translation by K. R. Srikantha Murthy, Chaukhambha Krishnadas Academy, Varanasi, Madhyamakhand, 2005; 316 Ch. 24/ Sloka9, 335 Ch. 24/ Sloka 161, 884.
9. Vangasena, Hindi commentary by Kaviraj Shri Shaligramaji Vaisya, Edited by Shri Vaidya Shankarlalaji Jain, KhemrajShreekrishnadasPrakasan, Bombay, 333-334, VatavyadhikaraSloka, 1996; 139: 1096.
10. Chakrapanidatta (Sanskrit Text wiyh Eng. translation), Chakradatta A Treatise on principles and practices of Ayurvedicmedicen, Edited by P.V. Sharma published by Chaukhambhaorientalia Delhi, 2007; 191: 731.

11. Sushruta, Sushruta Samhita, Nidanasthana with Nibandhasangraha of Sri Dalhanacarya and NyayacandrikaPanjika of Gayadasacarya on Nidanasthana, Edited by Vaidya YadavjiTrikamjiAcarya and Narayan Ram Acarya “Kavyatirtha”, Krishnadas Academy, Varanasi, 1998; 50-55, Ch.12,s 824.
12. Ayurveda Prakasha by Srimadhava with arthvidyotini and arthaprakasiniSanskrit, edited by Pt Shiva Sharma and GulrajSharmamishra, published by chaukamababharati academy Varanasi, 2007; ch. 2<sup>nd</sup> sl.no.46-48, 68-269, 504.
13. Vaidyakashabdashindu by kavirajumeshchandragupta, edited by kavirajnagendranathasena, published by chaukambaorientalia, Varanasi, 1021, 12124<sup>th</sup> edition, 1999.