

# Journal of Ayurveda and Integrated Medical Sciences

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An International Journal for Researches in Ayurveda and Allied Sciences



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# Journal of

# **Ayurveda and Integrated Medical Sciences**

REVIEW ARTICLE

Sept-Oct 2020

# Role of Patrapinda Sweda in Gridrasi w.s.r. to **Sciatica**

# Pavitra<sup>1</sup>, Shaila Borannavar<sup>2</sup>, Ananta S. Desai<sup>3</sup>

<sup>1</sup>Post Graduate Scholar, <sup>2</sup>Guide and Associate Professor, <sup>3</sup>Professor and HOD, Department of PG Studies in Panchakarma, Government Ayurveda Medical College, Bengaluru, Karnataka, INDIA.

# ABSTRACT

Gridhrasi is one of the painful conditions explained in Ayurveda in the context of vatavyadhi, where in the pain from the Sphik radiates to the Kati, Prusta, Uru, Janu, Jangha and upto Pada.[1] It can be compared to Sciatica as there is close resemblance in the manifestation of both the conditions. Sciatica is a relatively common condition with a lifetime incidence varying from 13% to 40%.[2] The corresponding annual incidence of an episode of sciatica ranges from 1% to 5%.[3] Now a days the most common disorder which affects the movement of leg particularly, low back ache out of which 40% are radiating pain that affects daily routine work. Snehana and Swedana are considered as the general line of treatment for Vata Vikaras[4] which can be taken as the line of treatment for Gridrasi. As per the classics, Swedana possesses Stambhaghna, Gauravaghna and Sheetaghna qualities.<sup>[5]</sup> Patra Pinda Sweda<sup>[6]</sup> is a form of Sankarasweda where different Vatahara drugs<sup>[7]</sup> are used. In this procedure, leaves of medicinal plants having Shothahara and Vedanastapana qualities are fried in medicated oil and tied into a Pottali. Thus, it has both Snehana and Swedana effect which helps in reducing the symptoms of Gridrasi. This paper is review of clinical application of Patrapinda Sweda and its efficacy in Gridrasi.

Key words: Gridhrasi, Vatavyadhi, Snehana, Swedana, Patra Pinda Sweda, Vedanasthapana.

# **INTRODUCTION**

Ayurveda, is a science that is widely acknowledged to be the world's oldest system of health. It's not only health care system, but considered as science of healing that enhances longevity. Panchakarma unique speciality of Ayurveda which deals with purification and detoxification (Shodhana Karma) of the body. In Panchakarma, Snehana and Swedana are used as

# Address for correspondence:

# Dr. Pavitra

Post Graduate Scholar, Department of PG Studies in Panchakarma, Government Ayurveda Medical College, Bengaluru, Karnataka,

E-mail: pavitraghosmani@gmail.com

Submission Date: 15/09/2020 Accepted Date: 19/10/2020

Access this article online **Quick Response Code** 

Website: www.jaims.in

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Poorvakarma as well as Pradhanakarma treating different diseases. Swedana is one of the Upakrama, which can be adopted for the management of Vata and Kapha Pradhana disorders<sup>[8]</sup> and can be performed by using various methods.

Gridhrasi is one of the Shoola Pradhana Vatavyadhi where altered function of Vata affects Gridhrasinadi (sciatica nerve), characterized by Stambha (stiffness), Ruk (pain), Toda (pricking pain) and Spandana (frequents twitching). These symptoms initially affect Sphik (buttock) as well as posterior aspect of Kati (waist) and then gradually radiates to posterior aspects of Uru (thigh), Janu (knee), Jangha (calf) and Pada (foot).[9] Patra Pindasweda being one among the Swedana Karma is a well known treatment for many Vatavikaras including Gridrasi.

# AIM AND OBJECTIVE

1. To evaluate management of Gridhrasi / Sciatica with Patra Pinda Sweda.

 To avoid the consequences of pain using ayurvedic treatment modality like Patra Pinda Sweda

#### Method

At present the lifestyle is gradually shifting away from healthy living, and therefore people fall victim of various diseases. Sedentary lifestyle, stress, improper posture, continuous jerky movements, long and frequent travelling etc. put maximum pressure on the spine and lower portion of the pelvis. About 80 - 90% of people get affected by low back pain and most of those become victims of sciatica.

#### Nidana

Abhighata (Trauma on lumbosacral spine ), Vishamacheshta ( postural defects), Bharavahana (overloading), Aticheshta (abrupt unbalanced movements), continuous jerky movements, sedentary lifestyle as well as psychological factors (Chinta, Shoka, etc.).[10]

### Rupa

Gridrasi is considered under Vataja Nanatmaja Vyadhi, Still while enumerating the diseases, it has been mentioned of two types viz. Vata dominant and Vatakaphaja dominant. The common symptoms are pain starts from Sphika and then radiates till Pada along with Stambha (stiffness), Toda (pricking pain), Spandana (twitching), and causes the Sakthiutkshepa Nigraha<sup>[11]</sup> ( restricted movements of lifting the leg). Whereas in Vatkaphaja type of Gridhrasi, Arochaka (anorexia), Tandra (nap) and Gaurava (heaviness) are found additionally. [12]

### Samprapti

As specific Samprapti of Gridhrasi is not described in the classics, can be considered on the similar way of vatavyadhi. Gridhrasi is Shoolapradhanavata Vyadhi and Shoola cannot be produced without involvement of Vata Dosha. Vyana and Apana are especially vitiated. Gati (Prasarana, Akunchana, Utkshepana etc.) are the functions of Prakrita Vyana Vata. The hamperd Sakthi Utkshepa Karma indicates Vyana

Dusti. Causes and Adhishthana of Gridhrasi resemble to Adhishthana and cause of Apana Dusti, hence Apana vitiation is prominent.

Though Vata is prominent Dosha, sometimes Kapha is Anubandh Dosha, but independently cannot produce Gridhrasi. According to Sushruta in this disease, the vitiated Dosha affects the Kandara (ligaments) and thus, the manifestation. Charaka explains that the Upadhatu Kandaras (ligaments) are Raktadhatu. Chakrapani mentions that Kandara (ligaments) may also be taken as Sthula Snayu, Snayu is Mulsthana of Mamsa as well as Updhatu of Meda. So Rakta, Mamsa and Meda taken as Dushya in the disease. As Gridhrasi Nadi (nerve) is involved, so Majjadhatu may naturally also be involved. On the basis of Ashraya Ashrayi Bhava, with the vitiation of Vata and above mentioned Dushyas, their Srotas are also known to be involved. Hence Rasawaha, Raktawaha, Mamsawaha, Medowaha, Asthiwaha and Majjawaha Srotas may be involved in this disease. The main *Udbhavsthana* of this disease is *Pakwashaya* because it is Nanatmaja Vatavyadhi. Amashaya may also be considered as an Udbhavsthana in the case of Vata Kaphaja type of Gridhrasi.[13]

#### Chikitsa Siddhant

For *Gridhrasi*, *Siravyadhana* should be performed over the vein located between *Khandara* and *Gulpha* along with *Basti* and *Agnikarma*.<sup>[14]</sup>

Difference between *Chikitsa* of *Vataja* and *Vatakaphaja Gridhrasi*.

| SN | Vataja Gridhrasi      | Vatakaphaja Gridhrasi           |
|----|-----------------------|---------------------------------|
| 1. | Vatanulomana Chikitsa | Kaphavruta Vata Chikitsa        |
| 2. | Virechana Karma       | Ushnaveerya Aushadha<br>Prayoga |
| 3. | Bahya Snehanam        | Avaranaghnam                    |
| 4. |                       | Rukshakriya                     |

#### Role of Panchakarma in Gridrasi

| Ach<br>ary<br>a<br>Cha<br>rak<br>a<br>(Ch<br>a.<br>Chi.<br>28/<br>101) | Acharya<br>Sushruta<br>(Su.Chi<br>5/23) and<br>Vagbhata(<br>As.Hr.Su.2<br>7/17) | Acharya<br>Vangase<br>na<br>(Vatavy<br>adhiadh<br>ikara<br>574-75) | Acharya<br>Chakrad<br>atta<br>(Vatavy<br>adhiadh<br>ikara<br>22/48-<br>50) | Achar<br>ya<br>Yogar<br>atnak<br>ara<br>(Y.R.<br>25/68<br>-71) | Acharya<br>Bhavaprak<br>asha (<br>Vatavyadhi<br>adhikara.2<br>4/133) |
|--|---|--|--|--|--|
| Sira<br>vya<br>dha   | Siravyadha  | Deepan<br>a<br>Paachan<br>a  | Pachana  | Siarav<br>yadha  | Vamana   |
| Bast<br>i<br>Kar<br>ma   | -   | Swedan<br>a<br>Mardan<br>a   | Shodhan<br>a   | Agnik<br>arma  | Virechana  |
| Agni<br>kar<br>ma  | -   | Basti<br>Upanah<br>a   | Basti  | -  | Basti  |
| -  | -   | Vamana<br>,<br>Virechan<br>a,<br>Agnikar<br>ma                     | Shastrak<br>arma   | -  | -  |

# Patra Pinda Sweda<sup>[15]</sup>

This is type of *Sweda* where in the fomentation is done by heated bolus bags containing leaves of medicinal plants.

According to different types of classifications, *Patrapinda Sweda* may be put under following groups:

- Agni Bheda : Sagni Sweda.
- Sthana Bheda : Ekanga as well as Sarvanga Sweda.
- GunaBheda : Snigdha Sweda.
- Roga and Rogi Bala : Madyama Sweda.
- Vagbhatoktha Tapadi Bheda : Ushma Sweda.

- Charakoktha Sankaradi Bheda : Sankara Sweda i.e. Sniqdha Sankara Sweda.
- Samshamana and Samshodhanangabhoota Bheda: Samshamaneeya Sweda.

# Procedure of Patrapinda Sweda: Materials required

- 1. Leaves (chopped into pieces) 1kg
- 2. Grated coconut 100g
- 3. Sliced lemon -2
- 4. Cotton cloth (45 cm X 45cm) 4pieces
- 5. Tags 4
- Vessels (for frying leaves and forheating Pottalis)
  2
- 7. Oil
  - a. For frying leaves 120ml
  - b. For heating Pottalis 200ml
  - c. For Abhyanga 100ml
  - d. For Talam 10ml
- 8. Rasnadi Choorna 8g
- 9. Towels 2
- 10. Masseurs 2
- 11. Attendant 1
- 12. Saindhava 5-10gms

Different medicinal powders can be added, if necessary. Medicinal leaves used for *Patra Pinda Sweda* are. [16]



# Preparation of *Pottali*

The fresh leaves should be washed in water and chopped into small pieces. The leaves, grated coconut and sliced lemon should be mixed thoroughly and

fried together in 100 ml of appropriate oil till coconut scrapings attain a brown tinge and divided in to four equal parts and made into *Pottalis*.



# Procedure of Patrapinda Sweda

#### Poorva Karma

The patient should be seated with leg extended over the *Droni* facing to the East. *Abhyanga* should be performed with prescribed medicated oil all over the body for about 10 minutes. *Talam* with suitable oil/ *Choorna* should be applied.

# Pradhana Karma

The prepared *Pottali* should be heated with suitable oil in a hot iron pan and applied after checking the temperature throughout the body with mild pressure in seven prescribed positions by two attendants standing on both sides of the *Droni*. Care should be taken to maintain the temperature throughout the procedure by reheating the *Pottalis*.

# Paschath Karma

Wipe off the oil from the body using clean dry towel and is covered with thin blanket for 10-15 minutes. Remove *Talam* and apply *Rasnadi Choorna*. Advised to take hot water bath after half an hour depending on disease.

# **Duration:** 45min-1 hour

# **Precautions**

- Care should be taken to prevent charring while frying leaves and also while reheating the Pottalis.
- Every time the therapist should ensure the temperature of the *Pottali* by placing it over their

own dorsum of hand. Also enquire the patient whether the temperature is bearable.

- If the patient feels any discomfort or attains good perspiration at any time during the treatment the therapy should be stopped.
- Ideal time to perform the procedure is between 7-11 am and 3-6 pm.

# **Complications**

Burns and fainting: if occurs, stop the procedure and *Agnidagdha Chikitsa* has to be done.

### Mode of action of Patra Pinda Sweda in Gridrasi

The drugs used in *Patra Pinda Sweda* are having the qualities like *Ushna* and *Snigdha Guna* does *Srotoshuddhi* and *Amapachana*, inturn relieves stiffness there by acts as *Stambhaghna*, *Gauravaghna* as they relieve heaviness in the body through sweating, *Sitaghna* by their *Ushna* quality and *Swedakaraka* as they promote sweating through which impurities of the body come out.

Swedana acts by its qualities like Ushna, Tikhna etc. it increases the metabolic rate in the body. Ushna Guna of Sweda dilates the capillaries (vasodilatation) thus it increases circulation. There by enhances the elimination of waste products and more absorption of Sneha or drugs through the skin, as in Patra Pinda Sweda we use Vata Kaphahara drugs when they are absorbed into the body they does their action along with Swedana. Also it stimulates muscles and nerves, which promotes its renovation and also hypnoanalgesic effect by diverted stimuli. [17]

The probable mode of action of *Patrapinda Sweda* in *Gridrasi* can be explained under following headings;

# Thermal effect

Diffusion through the skin is a temperature dependent process (According to Kligman), so raising the skin temperature will enhance the Transdermal delivery of various drugs by increasing skin permeability, body fluid circulation, blood vessel wall permeability, drug solubility. External heating will dilate the penetration pathways in the skin, increases

ISSN: 2456-3110 REVIEW ARTICLE Sept-Oct 2020

kinetic energy and movement of particles in the treated area and facilitate drug absorption.

- Heat is having indirect effect on,
  - Muscle tissue: Increase in temperature
  - Muscle relaxation increased muscle action efficiency.
  - Increased activity of Sweat glands Reflex stimulation of Sweat glands resulting from effect of heat on the sensory nerve endings.
- Heat has been applied as a counter irritant, which is the thermal stimulus, may affect the pain sensation (Theory of Melzackand Wall).

#### **Procedural effect**

Procedure is exceedingly beneficial to the skin as it works directly on the lymphatic system. This system is

supplementary to the blood vascular system and offers an alternative route for the return of tissue fluid to the blood stream. By stimulating lymphatic flow and generating heat through friction (rubbing) and application of the oils, massage cleanses and vitalizes the body without causing the build-up of toxins. Thus procedure quickens the circulation of blood and lymph and dislodges the toxins and increases the vitality of the tissues.

# **Drug effect**

The *Patras* used for the *Patra Pinda Sweda* are mentioned in the *Swedopaga Gana* according to Acharya Caraka and drugs are having *Vatahara* property and all the drugs used here have *Ushna Veerya, Snigdha, Sukshma Guna*. Thus the drugs act on the *Vata* directly.

| Drug      | Latin Name                  | Rasa                          | Guna                            | Veerya | Vipaka        | Doshakarma        | Karma                                       |
|-----------|-----------------------------|-------------------------------|---------------------------------|--------|---------------|-------------------|---|
| Eranda    | Ricinus<br>communis<br>Linn | Madhura,<br>Katu,<br>Kashaya  | Snigdha,<br>Tikshna,<br>Sukshma | Ushna  | Katu          | Kaphavataha<br>ra | Vedanasthapana,<br>Shulahara,<br>Shothahara |
| Arka      | Calotropis<br>gigantia      | Katu, Tikta                   | Laghu,<br>Ruksha,<br>Tikshna    | Ushna  | Katu          | Vatahara          | Swedopaga,<br>Shothahara                    |
| Nirgundi  | Vitex<br>negundoLinn        | Katu,Tikta                    | Laghu,<br>Ruksha                | Ushna  | Katu          | VataKaphah<br>ara | Rujapaha Amahara<br>Shulahara               |
| Sigru     | Moringa<br>oleifera         | Katu, Tikta                   | Laghu,<br>Ruksha,<br>Tikshna    | Ushna  | KatuTik<br>ta | KaphaVatah<br>ara | Krimihara<br>Brimhana                       |
| Punarnava | Boerhaavia<br>diffusa       | Madhura,<br>Tikta,<br>Kashaya | Laghuruksh<br>a                 | Ushna  | Madhur<br>a   | Tridoshahara      | Anti-inflammatory<br>Rasayana               |

### **DISCUSSION**

The main and direct reference available on the mode of action of *Bahirparimarjana* is from Susruta Samhita (Su.Sa.9/9). It explains that "The branch of body's peripheral conduction network with their portals in

the skin is concerned with perspiration, perception of cutaneous pleasure and pain sensations, as well as circulation of tissue fluid. Conduction of the activity or potency of the therapeutic regimen or agent into the body, after conversion (transduction) in the skin, also forms their attribute".

Swedana is a procedure where stimulating the body temperature by contact with the external heat source, there by producing Sweda. The Ushna Guna of Swedana Karma leads to stimulate the sympathetic nervous system and produces vasodilatation, also increases the circulation of Rasa and Rakta in the body, due to effect of Sara and Suksamaguna the Leena Dosha are liquefied and come out through micropores presenting over the skin resulting in more excretion of liquefied vitated Dosa from body.

Heating the tissues results in increase in temperature causing increased metabolism in turn vasodilatation and induction of sweating - Vasodilatation occurs particularly in superficial tissues where the heating is greatest. Stimulation of superficial nerve endings can also cause a reflex dilatation of arterioles. By this necessary O2 and nutritive materials supplied.

# Action of *Patrapinda Sweda* on specific symptoms of *Gridrasi* disease

#### Effect on Ruk

Ruk is due to Vatavridhi. Once Vata vitiation is corrected Ruk will be reduced. As the drugs used are having Ushnavirya, Vatakaphahara, Vedanasthapaka and Sothahara property helps in reducing the pain. Also by increasing temperature locally to the muscle, improves blood circulation and helps to reduce pain.

#### Effect on Toda

During procedure the drugs used in general relieve muscle spasm and thus relieves pressure on the nerves, then blood supply to the nerves is improved and thus relieves pain.

#### Effect on Stambha

Stambha is the result of Kapha or Ama and drugs used are having Ushna, Tikshna and Sukshma Gunas helps to reduce Kapha and Ama.

# Effect on Spandana

Spandana or pulsating pain occurs as a result of Vataprakopa. Due to procedure, Vataprakopa is reduced by Snigdha and Ushna Guna of Dravyas used, leading to reduction in Spandana.

#### Effect on Gourava

Gourava is due to Apya and Prithvi Mahabhoota. During procedure, Apya Mahabhoota is coming out as perspiration leading to reduction in Gourava and brings Laghuta in the body.

#### Effect on Arochaka

Increased body temperature increases sympathetic activities, releasing hormones like epinephrine, norepinephrine, cortisol and thyroid hormones. It accelerates metabolic rate and stimulates process of lipolysis, thereby increasing demand of oxygen and increased output of wastes i.e. digestion of *Ama* leading to *Agni* Deepti.<sup>[18]</sup>

# **CONCLUSION**

Gridhrasi is a Shoolapradhana Nanatmaja Vata Vyadhi, intervening with the functional ability of low back and lower limbs. In this disease onset of Ruk, Toda and Stambha is initially in Kati and radiates distal to Prista, Janu, Jangha till Pada. This is the unique feature of this disease. Snehana, Swedana and Mrudu Sodhana are the Principles of treatment in all Vaatavyadhi. As Snaayu and Kandara are involved as Dooshya, Agnikarma and Siravyadha are mentioned among the lines of treatments. Shamanoushadhis are also mentioned by many Acharvas, along with this an added advantage will be achieved if Snehana and Swedana are done which relieves Stambha, Gaurava, Sheetata and Ruk. Sankara Sweda is one among 13 types of Sweda mentioned in Charaka Samhita. A bolus of fresh drugs is prepared by wrapping in clothes and heated to lukewarm and applied over the painful parts. It is an ideal treatment for application of heat to specific part of body. Due to direct contact of heat the penetration is deeper and hence effectively reduces pain, swelling and stiffness. This is unique and effective method of managing sever pain in Gridrasi.

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**How to cite this article:** Pavitra, Shaila Borannavar, Ananta S. Desai. Role of Patrapinda Sweda in Gridrasi w.s.r. to Sciatica. J Ayurveda Integr Med Sci 2020;5:290-296.

**Source of Support:** Nil, **Conflict of Interest:** None declared.

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