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Clinical study of brihat panchamool tail katibasti in the management of gridhrasi (SCIATICA)

Anil Kumar Singh, U.S. Nigam

¹MD Kayachikitsa, Dhanvantari Ayurved Mahavidyalaya, Vikram University, Ujjain, M.P. INDIA

²Prof. & H.O.D., dept. of Kayachikitsa, Dhanvantari Ayurved Mahavidyalaya, Vikram University, Ujjain, M.P. India.

*Corresponding Author: Anil Kumar Singh

ABSTRACT

A variety of Vatavyadhi described in Charaka Samhita are divided into Samanyaja and Nanatmaja group. Gridhrasi comes under 80 types of Nanatmaja Vatavyadhi though, occasionally there is Kaphanubandha. The name itself indicates the way of gate shown by the patients due to extreme pain just like a Gridhra (vulture), it is clear that this disease not only inflicts pain but also causes difficulty in walking, which is very much frustrating and embracing to the patient. In Ayurvedic classics, our Acharyas have given so many special therapeutically procedures for specific disease along with thousands of medicaments. Panchakarma is a very unique therapeutic procedure because of its preventive, promotive, prophylactic and rejuvenate properties as well as providing a radical cure. Kati Basti is a treatment for the Gridhrasi and lower back pain. It is the most famous among Ayurvedic Physicians. Total 10 patients were registered from O.P.D. and I.P.D. of Dhanvantari Ayurved Mahavidyalaya and Hospital, Ujjain. Result of the study revealed that *Katibasti* effective in reducing the sign & symptoms of disease as well as physical assessment.

Keywords: Gridhrasi, Sciatica, Katibasti, BrihatPanchamool Tail

INTRODUCTION

Gridhrasi is a severely painful condition so, Vata Pradhanya in its pathogenesis is clear. The cardinal signs and symptoms of Gridhrasi (Sciatica) are Ruka (pain), Toda (pricking sensation), Stambha (stiffness) and Muhuspandana (twitching). Charaka has described Nanatmaja and Samanyaja Vatavyadhi, [1] Gridhrasi comes under both as it is caused by Vata (Nanatmaja) as well as Kaphanubandhi Vata (Samanyaja). [2] In Gridhrasi Vatanubandhi symptoms like, Stambha, Ruk, Toda, Graha and Spanda in Sphika, Kati, Uru, Janu, Jangha and Pada, in ascending order and

Sakthikshepa Nigraha [3] i.e. restricted lifting of leg and in Kaphanubandhi [4] symptoms like Arochaka, Tandra and Gaurava are found. In modern science, analgesics or surgery or physiotherapy or bed rest are the only remedies for this disease, which may sometimes produce several systemic side effects the more effective drugs give rise to more serious and irreversible reactions. In Ayurveda Panchakarma is the booming concept and is gaining much popularity in recent times. Its a process to thoroughly cleanse the toxins of body that are produced due to disease and/or poor nutrition. Panchakarma helps the body to maintain balance and longevity. Most of the treatments in

Panchakarma are used to treat deep rooted diseases. The Kati Basti is BahyaSnehanSwedan⁵ treatment concept was introduced by Dalhana. He has given a perfect idea about these external bastis. Though there is no direct reference in Samhitas regarding Kati Basti, still efficacy of Kati Basti⁶ is also observed. It is a type of Bahirpariman in Chikitsa in which hot oil is retained over the lumbar region which acts locally in order to break local Samprapti of the disease. So, Kati Basti was selected for the present study. For present study Kala Basti was selected with BrihatPanchamool Tail. Acharya charaka describe BrihatPanchamool Tail [7] in Vata vyadhichikitsa. The present research entitled “clinical study of BrihatPanchamool Tail Katibasti in the management of Gridhrasi (sciatica)” was undertaken with following Aims and Objectives.

AIMS & OBJECTIVES

1. To evaluate the efficacy of BrihatPanchamool Tail Kati Basti in management of Gridhrasi (Sciatica).
2. To study the Role of Kati Basti in the management of Gridhrasi

MATERIALS AND METHODS

Selection Criteria

Patients suffering from Gridhrasi diagnosed on the basis of signs and symptoms, attending the O.P.D. and I.P.D. of Dhanvantari Ayurved Mahavidyalaya and Hospital, were selected randomly irrespective of their age, sex, religion, caste, occupation etc.

Inclusion Criteria

- Diagnosed cases of Gridhrasi (Sciatica)
- Patients, belong to the age group of 20 - 70 years.

Exclusion Criteria

- Uncontrolled Diabetes Mellitus and Hypertension
- Uncontrolled T.B. of spine & hip joint
- Malignancy of spine or other organs
- Fracture related to spine
- Pregnancy
- Cardiac diseases and Other systemic diseases.

Diagnostic Criteria

Patients were diagnosed on the basis of classical signs and symptoms of Gridhrasi like pain radiating from Sphika (hip) to Pada(foot) region, Other symptoms of Gridhrasi like Stambha (stiffness), Suptata (numbness & tingling) and Gaurava, Tenderness along the course of sciatic nerve, S.L.R. test in affected leg as objective measure were also included for diagnosis. X-Ray for Lumbar spine in AP or Lateral view was done in every patient.

Grouping

10 Patients were randomly selected for Brihat Panchamool Tail (100ml) Katibasti for 21 days

Radiological Examination

X-ray- Lumbo-Sacral spine (Antero-posterior & Lateral / Oblique view)

Criteria for Assessment

The improvement was assessed on the basis of relief found in the cardinal features of the disease. To assess the effect of therapy all the sign and symptoms were assigned score depending upon their severity as elaborated below:

Ruka (Pain)

▪ No pain	-	0
▪ Occasional pain	-	1
▪ Mild pain but no difficulty in walking	-	2
▪ Moderate pain and slight difficulty in walking	-	3
▪ Sever pain with sever difficulty in walking	-	4

Toda (Pricking Sensation)

▪ No pricking sensation	-	0
▪ Occasional pricking sensation	-	1
▪ Mild pricking sensation	-	2
▪ Moderate pricking sensation	-	3
▪ Severe pricking sensation	-	4

Stambha (Stiffness)		
▪ No stiffness	-	0
▪ Sometimes for 5 – 10 minutes	-	1
▪ Daily for 10 – 30 minutes	-	2
▪ Daily for 30 – 60 minutes	-	3
▪ Daily more than 1 hour	-	4
Spandana (Twitching)		
▪ No Twitching	-	0
▪ Sometimes for 5-10 minutes	-	1
▪ Daily for 10-30 minutes	-	2
▪ Daily for 30-60 minutes	-	3
▪ Daily more than 1 hour	-	4
Aruchi (Anorexia)		
▪ No anorexia	-	0
▪ Mild anorexia	-	1
▪ Moderate anorexia	-	2
▪ Severe anorexia	-	3
Tandra (Drowsiness)		
▪ No Tandra	-	0
▪ Mild Tandra	-	1
▪ Moderate Tandra	-	2
▪ Severe Tandra	-	3
Gaurava (Heaviness)		
▪ No heaviness	-	0
▪ Mild heaviness	-	1
▪ Moderate heaviness	-	2
▪ Severe heaviness	-	3
S.L.R. Test		
▪ More than 90 ⁰	-	0
▪ 60 ⁰ – <90 ⁰	-	1
▪ 45 ⁰ – 60 ⁰	-	2
▪ 30 ⁰ – 45 ⁰	-	3
▪ Up to 30 ⁰	-	4
Scoliosis (Dehpravakrata)		
▪ No scoliosis	-	0
▪ Mild scoliosis	-	1
▪ Moderate scoliosis	-	2
▪ Severe scoliosis	-	3

Muscles power

- No contraction 0
- A flicker of contraction only 1
- Muscle contraction with gravity excluded 2
- Muscle contraction against gravity 3
- Muscle contraction against gravity and Resistance 4
- Normal Muscle contraction 5

STATISTICAL ANALYSIS

The information gathered on the basis of above observations was subjected to statistical analysis. Students paired 't' test was applied for the parameters to analyse the effect of therapy. The results were interpreted at $p < 0.05$, $p < 0.01$ and $p < 0.001$ significance levels.

Criteria for overall assessment

- Complete Remission: 75-100% relief in Signs and Symptoms of Gridhrasi

- Moderate Improvement: 51-74% relief in Signs and Symptoms
- Mild Improvement: 26-49 % relief in Signs and Symptoms
- No Improvement / Unchanged: 0-25%No relief in Signs and Symptoms

Katibasti Karma

Chikista can be classified as Anta-Parimarjana, Bahi-Parimarjana and Shastra- Pranidhana on the basis of route administration. Kati-Basti may be included under Bahir-Parimarjana Chikitsa. Procedure of Kati Basti. The procedure of Kati Basti can be performed in the following three stages:

1. Poorva karma
2. Pradhana karma
3. Paschat karma

Poorva Karma

This includes preparatory measures like preparation of patient, preparation of medicine and collection of materials required for the smooth execution of the procedure. It can be conducted under following considerations.

AturaPariksha

The patient is examined in relation to DashavidhaPariksha and by applying Pratyaksha, Anumana and Aptopadeshasiddhantas to assess Vyadhi, Bala and Deha, Bala. Then, Lumbar region is examined properly and the region of maximum tenderness is noted. It is also examined for scars & wounds.

SambharaSangraha

It includes a metal ring, Masha Pishti, AushadhaDravya (Nirgundi Taila-250ml), spoon, bowl, vessel, water, gas stove and table.

AturaSiddhata

Patient is made to lie down comfortably on the table in prone position having confirmed that he has passed the stool and urine properly. Then the patient is asked to drape the clothes so that lumbosacral area could be exposed properly.

PradhanaKarma

Basti Yantra Dharana

First, Masha pishti is prepared by adding sufficient quantity of water to the flour of Black

gram. Then, with the use of metal ring and Masha pisti a pit of about two inches height and four inches diameter is made around the lumbosacral area. The concavity of pit (Basti Yantra) should be well sealed to prevent the leakage of the medicine retained in the cavity.

Aushadhi Dharana

The bowl containing medicine is heated indirectly by keeping over hot water. Then, the gently heated Luke warm BrihatPanchamool Tailis poured slowly and carefully on the Kati Pradesh along the side of the Basti-Yantra. The heat of the medicine should be sufficient enough to be tolerated by the patient. The level of the medicine should be two Angula above the highest point inside the cavity.

Maintenance of constant temperature of medicine

(40-420C) The medicine in the pit is replaced with heated medicine every 5 minutes so that a constant temperature is maintained throughout the procedure.

Removal of Dravya and Basti Yantra

After the specified time, i.e. 30 minutes, the BrihatPanchamool Tail is removed from the Basti Yantra and then the Basti Yantra is removed.

Samyak Lakshana [8]

The SamyakLakshanas of Kati Basti are not described in our classics. Even though Kati Basti is a modification of Shiro Basti, those SamyakLakshanas cannot be interpreted for Kati Basti. Therefore, the Ayoga, Atiyoga and Samyakyogabahya

Pashchat Karma

To remove the oil, a spoon can be used and the oil can be collected in a separate vessel. Then the paste is detached from the body. In a relax position the patient is then allowed to take rest i.e. patients is instructed to lie down in supine position without having any contact with external environment. The table should have either thin bedding or uniform plain and wooden.

OBSERVATIONS AND RESULTS

Table - 1: Effect of Therapy according to sign and symptoms in Kati Basti Group

Signs & Symptoms	Mean Score		%	S.D.	S.E.	't'	Result
	B.T.	A.T.					
Ruka	2.5	0.7	72	0.421	0.133	13.5	<0.001
Stambha	2	0.7	60	0.788	0.249	4.81	<0.001
Toda	1.6	0.7	56.25	0.737	0.233	3.85	<0.01
Spandana	1.7	0.8	52.94	0.875	0.276	3.25	<0.01
Tandra	0.8	0.5	37.5	0.483	0.152	1.96	<0.1
Gaurava	1.4	0.7	50	0.82	0.26	2.69	<0.05
Aruchi	0.8	0.5	37.5	0.483	0.152	1.67	<0.1
Supti	1	06	40	0.699	0.221	1.8	<0.1

Table - 2: Effect of Therapy according to Objective parameters in Kati Basti Group

Signs & Symptoms	Mean Score		%	S.D.	S.E.	't'	Result
	B.T.	A.T.					
SLR Test	2.3	0.6	73.90	0.48	0.15	11.12	<0.001
Scoliosis	1.5	0.6	60	0.99	0.31	2.86	<0.01
Muscle power	2.2	0.8	63.63	0.51	0.16	8.57	<0.001

DISCUSSION

In Gridhrasi there are two main reasons by which Vata gets vitiated. They are Dhatukshaya and Margavarodha. [9] Because of the Samprapti Vishesh, the same Nidanas produce different Vatavyadhies. This is because the presentation of the disease changes according to the Sthana where Dosha-DushyaSammurchhana takes place [10] Khavaigunya plays an important role in the disease process. In Gridhrasi, exposure to mild but continuous Trauma to Kati, Sphik region because of improper posture, travelling in jerky vehicles, carrying heavy loads, digging etc. or sometimes spinal cord injury, improperly treated pelvic diseases are responsible for producing

Sthanavaigunya at Kati, Sphik, Prishtha etc. They may not be able to produce the disease at the instance, but after acquiring some Vyanjakahetu (exciting cause), the disease may be produced. Here, the Samprapti takes place either by Apatarpana or Santarpana or Agantuja. Sciatica is a condition described in modern medicine resembles with Gridhrasi. In sciatica, there is pain in distribution of sciatic nerve which begins in the lower back and radiates through the posterior aspect of the thigh and calf and to the outer boarder of foot. Herniation and degenerative changes in the disc are the most common causes. There is often history of trauma as twisting of the spine, lifting heavy objects or exposure to cold. The disability

caused by this disease hampers day to day activity of the patients and makes the patients crippled. Modern medical treatment has its own limitation in managing this type of disease. It can provide either conservative or surgical treatment and is highly symptomatic and with troublesome side effects, whereas such type of conditions can be better treated by the management and procedures mentioned in Ayurvedic classics. Kati Basti helps to cure disorders of Spinal Cord and other areas involved in Gridhrasi, in which aggravation of Vata may be considered as chief culprit, there by releasing nerve compression and related symptoms.

Probable Mode of action of Katibasti

Kati Basti is procedure evolved from Shiro Basti, in which the properties of Bahya Snehana and Swedana are incorporated. The reason behind selection of Kati Basti is that it comes under direct contact with the painful region. Local Snehana and Swedana is very effective and gives quick results because they act at the site of Samprapti directly. Shushruta explains that TiryakDhamani divides into hundred and thousand times and become innumerable. These Dhamani form a network and spread all over body. They have their opening in the Loma Koopa. The Dravya applied over the skin is absorbed through these opening and undergo Pachana by the help of Bhajaka Pitta which is situated in the skin. The Dravya can be applied in various forms such as Abhyanga, Parisheka, Avagaha etc. All the drugs

applied in any of these forms undergo Pachana in the way explained above. Vagbhata explained the same mode of absorption of the drugs applied over the skin. Thus by above references it can be said the Dravya used in Kati Basti is absorbed through skin and produce an action according to the properties of drug. Due to all these reasons the blood circulation is increased and the active ingredients of drug are supplied to the target cells. Also, there is elimination of wastage products from the localized area such as prostaglandins which play a vital role in pain pathology. All the drugs in the BrihatPanchamool Tail are having Sukshma, Tikshna and Ushna property with Vata and Vata kaphahara action.

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CONCLUSION

Gridhrasi due to its clinical manifestation, pathogenesis and complication can be positively correlated with Sciatica. Kati Basti with BrihatPanchamool Tail which is classically mentioned can be used in both the type of Gridhrasi in general. Kati Basti drugs is absorbed through skin and produce an action according to the properties of drug. Result of the study revealed that BrihatPanchamool Tail *Katibasti* effective in reducing the Ruka (Pain), Toda (Pricking Sensation), Stambha (Stiffness), Spandana (Twitching), Scoliosis (Dehpravakrata) and improve the S.L.R. Test and Muscles power of affected leg.

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