

## Clinical effect of Sepalika (*Nycanthes arbortristis*) Niruha Vasti, Sepalika Sudulunu Kashaya and Lakshadilepa on Grudhrasi (sciatica)-A case study

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### Abstract

*Grudhrasi* is a disease occurred by vitiation of *Vata Dosha* alone or *Vata Dosha* in association with vitiated *Kapha Dosha*. *Grudhrasi* has a close resemblance with sciatica in modern parlance. Sciatica is a term often used to describe low back pain that radiates from back to hip and thigh and along the leg. *Sepalika Niruha Vasti*, decoction of *Sepalika Sudulunu*, *Lakshadilepa* mixed with juices of leaves of *Toddalia asiatica* and rhizome of *Curcuma domestica* are used by traditional physicians in Sri Lanka to treat patients suffering from *Grudhrasi* (sciatica). So far, no known scientific study has been done to evaluate the effect of aforesaid treatments. Hence the present study was undertaken. In this case study, a 57 years male patient suffering from *Grudhrasi* (sciatica) was selected from Indoor Patient Department, Ayurveda Teaching Hospital, Borella, Sri Lanka. The patient was treated for 19 days with aforesaid treatment. The response to the treatment was recorded and therapeutic effects were evaluated through symptomatic relief. At the end of the treatment, the patient was completely relieved. It is concluded that this treatment regimen is beneficial in treatment of *Grudhrasi* (sciatica).

**Keywords:** *Grudhrasi*, *Lakshadilepa*, *Nycanthes arbortristis*, Sciatica, *Sepalika*, *Sepalika Niruha Vasti*.

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**Introduction:**

*Grudhrasi* is a *Vata* predominant disease but sometimes it may be associated with vitiated *Kapha Dosha*. *Grudhrasi* is characterized by stiffness and severe pain starting from lumbar region moving downwards through thighs, knees, calves and feet.<sup>[1]</sup> *Grudhrasi* can be correlated with sciatica in modern parlance. In sciatica, pain is felt in the lumbar region and may radiate to the buttocks, thigh, calf and foot.<sup>[2]</sup> Bavaprakasha describes *Vasti Karma* as one of the therapeutic measures which can be used in treatment of *Grudhrasi*.<sup>[3]</sup> Hence it was decided to conduct *Vasti Karma*. Dr. Manel Weerasighe, former medical officer at the Ayurvedic teaching hospital, Borella uses *Sepalika Niruha Vasti*, *Sepalika Sudulunu* decoction internally and *Lakshadilepa* with juices of leaves of *Toddalia asiatica* and fresh rhizome of *Curcuma domestica* externally to treat patients suffering from *Grudhrasi* (sciatica) with effective results. So far, no known scientific study has been carried out to evaluate the effect of aforesaid treatments. Hence present study was undertaken to evaluate clinical effect of Ayurveda treatment in *Grudhrasi*.

**Case Report:**

A 57 year old male, attending the indoor patients department of Ayurveda Teaching Hospital, Borella for treatment of lower back pain and difficulty in walking with a history of six months was selected. Initially he had a pain in the middle part of the lower back region and calf region of right leg which gradually increased and radiated to

the right foot. He was suffering from drowsiness, anorexia and heaviness of the body also. The patient reported that he was having discomfort in supine position. It was also painful for him to stand up from sitting position. Lasègue's sign was positive and was elicited at 40° in the right leg. X ray in lumbosacral region did not show any deformities. The severities of the symptoms were recorded using a specially prepared grading scale as given below.

Grading of signs and symptoms of *Grudhrasi* (sciatica)

- 0 - Does not feel
- 1 - Feels occasionally
- 2 - Feels intermittently
- 3 - Feels often
- 4 - Feels always

Selected patient was treated for 19 days with the treatment schedule as mentioned in table- 1)

Ashtanga Hridaya advises to administer *Niruha* and *Anuvasana Vasti* on the same day.<sup>[4]</sup> The patient was treated with *Yoga Vasti* by giving eight *Vasti* (medicated enemas-one of the panchakarma procedure) during five day as mentioned in table- 2.

**Method of preparation of Sepalika Sudulunu Kashaya:**

30g of cloves of *Allium sativum* (Family: Amaryllidaceae; Sinhala name: *Sudulunu*) and fresh leaves of *Nycanthes arbortristis* (Family: Oleaceae; Sinhala name: *Sepalika*) were taken. 1920ml of water was added to

the above mixture and boiled down to 240ml.

### Method of preparation of Lakshadilepa

*Lakshadilepa* was prepared according to the formula and method practiced by the Pharmacy of Ayurveda Teaching hospital, Borella, Sri Lanka. 10g each of *Laksha* (a resinous substance produced on trees, by the *Laccifer lacca* a scale-shaped insect; Sinhala name: *Kappetiya Lakada*), root of *Rubia cordifolia* (Family: Rubiaceae; Sinhala name: *Welmadata*), stem of *Glycyrrhiza glabra* (Family: Fabaceae; Sinhala name: *Welmi*), pericarp of *Terminalia chebula* (Family: Combretaceae; Sinhala name: *Aralu*), cloves of *Allium sativum* (Family: Amaryllidaceae; Sinhala name: *Sudulunu*), stem of *Pterocarpus santalinus* (Family: Fabaceae; Sinhala name: *Rathhadun*) and sugar was taken. These ingredients were powdered separately and mixed together. The mixture was ground together with sufficient quantity of bee's honey and then with ghee until it turns into a fine paste.

### Method of Application of *Lakshadilepa* with juice of *Toddalia asiatica* and *Curcuma domestica*

50g of fresh leaves of *Toddalia asiatica* (Family: Rutaceae; Sinhala name: *Kudumirissa*) was pounded well and 10ml of juice was extracted. 40g of fresh rhizome of *Curcuma domestica* (Family: Zingiberaceae; Sinhala name: *Kaha*) was pounded and 10ml of juice was extracted. These juices were mixed together and warmed. 50g of

*Lakshadilepa* was dissolved in this mixture and applied on the lumbar sacral region.

### Method of preparation of Sepalika Niruha Vasti

10g of *Sahindava Lavana* (rock salt) was triturated with 60ml of bee's honey. 60ml of sesame oil was added little by little to this mixture and triturated well. Then 30g of paste prepared with leaves of *Nycanthes arbortristis* was added to this mixture. Then 450ml of decoction of *Nycanthes arbortristis* was added while triturating the mixture. This preparation was used as *Sepalika Niruha Vasti*.

Decoction of *Nycanthes arbortristis* was used as the decoction in *Sepalika Niruha Vasti*. It was prepared by boiling 120gms of fresh leaves with 1920ml water. The mixture was boiled down to one fourth (1/4) of the initial volume that is 480ml. <sup>[5]</sup>

### Procedure of Vasti Karma

The patient was made to lie in supine position and *Snehana Karma* (oleation) and *Sweda Karma* (fomentation) was carried out. *Snehana Karma* (oleation) was conducted by applying sesame oil which was warmed to body temperature on the abdomen, thigh and lumbar sacral region. After applying oil, *Sweda Karma* (fomentation) was carried out using hot water steam (*Ushma Sweda*). A thick towel was immersed in boiling water and wrung dry. Then the towel unfolded slowly. The steam rising from the towel was used for fomentation. Then the patient was kept on left lateral position and *Vasti* was administered.

**Table- 1: Treatment schedule**

Day	Treatment
Day1 to Day5	<i>Yoga Vasti</i>
Day6 to Day19	120ml of <i>Sepalika Sudulunu Kashaya</i> twice a day for 14 days internally. <i>Lakshadilepa</i> with juice of <i>Toddalia asiatica</i> and <i>Curcuma domestica</i> were applied over the lumbar sacral region once a day for 14 days and kept for three hours. Then lumbar sacral region was cleaned with warm water.

**Fig-1: Sepalika (*Nycanthes arbortristis*)****Table- 2: Schedule of *Yoga Vasti***

Day	Vasti	Type of Vasti	Time	Used medicine
Day 1	1 <sup>st</sup> Vasti	<i>Anuvasana</i>	2.00 – 3.00pm	Sesame Oil (60ml)
Day 2	2 <sup>nd</sup> Vasti	<i>Niruha</i>	6.00 – 7.00am	<i>Sepalika Niruha Vasti</i> (510ml)
	3 <sup>rd</sup> Vasti	<i>Anuvasana</i>	2.00 – 3.00pm	Sesame Oil (60ml)
Day 3	4 <sup>th</sup> Vasti	<i>Niruha</i>	6.00 – 7.00am	<i>Sepalika Niruha Vasti</i> (510ml)
	5 <sup>th</sup> Vasti	<i>Anuvasana</i>	2.00 – 3.00pm	Sesame Oil (60ml)
Day 4	6 <sup>th</sup> Vasti	<i>Niruha</i>	6.00 – 7.00am	<i>Sepalika Niruha Vasti</i> (510ml)
	7 <sup>th</sup> Vasti	<i>Anuvasana</i>	2.00 – 3.00pm	Sesame Oil (60ml)
Day 5	8 <sup>th</sup> Vasti	<i>Anuvasana</i>	2.00 – 3.00pm	Sesame Oil (60ml)

**Result and Discussion:**

After completion of *Vasti Karma*, stiffness in lumbar region and calves, drowsiness, anorexia and heaviness in the body were completely relieved. But stiffness in back, pain in buttocks, lumbar region, calves and foot and piercing pain in lumbar region, buttocks, thigh, calves and foot were partially relieved. On completion of entire treatment schedule, all the symptoms were completely relieved (Table 3). Lasègue's sign became negative in the right leg and after completion of entire course of treatment. The patient did not experience any pain at any angle when lifting the leg.

Ayurveda pharmacodynamic properties of ingredients of *Sepalika Niruha Vasti* are tabulated in Table 4. Ingredients of *Sepalika Niruha Vasti* possesses *Madhura* and *Lavana Rasa*, *Guru* and *Snigdha Guna*, *Ushna Veerya* and *Madhura Vipaka*. Hence it pacifies vitiated *Vata Dosha*. These ingredients have the properties of *Tikta Rasa*, *Laghu Guna*, *Ushna Veerya* and *Katu Vipaka*. Therefore, it pacifies vitiated *Kapha Dosha*. Due to these properties *Sepalika Niruha Vasti* is beneficial in treatment of diseases occurred by vitiation of *Vata* and *Kapha Dosha* including *Grudhrasi* (Sciatica).

Ayurveda pharmacodynamic properties of *Sepalika Sudulunu Kashaya* are tabulated in

Table 5. Ingredients of *Sepalika Sudulunu Kashaya* possesses *Madhura*, *Lavana* and *Amla Rasa*, *Guru* and *Snigdha Guna* and *Ushna Veerya*. Because of these properties it helps to pacify the vitiated *Vata Dosha*. It also pacifies vitiated *Kapha Dosha*, as these ingredients possesses *Tikta* and *Katu Rasa*, *Theekshna* and *Ruksha Guna*, *Ushna Veerya* and *Katu Vipaka*. Hence *Sepalika Sudulunu Kashaya* can be used in treatment of diseases occurred by vitiation of *Vata* and *Kapha Dosha* including *Grudhrasi* with effective results.

Ayurveda pharmacodynamic properties of ingredients of *Lakshadilepa*, (*Curcuma domestica* and *Toddalia asiatica*) are tabulated in Table 6 and 7. Effect of *Lakshadilepa* can be enhanced by mixing with the juices of *Toddalia asiatica* and *Curcuma domestica*. The ingredients of the external application possess *Madhura*, *Lavana* and *Amla Rasa*, *Guru* and *Snigdha Guna*, *Ushna Veerya* which helps to pacify the vitiated *Vata Dosha*. These ingredients possess *Tikta* and *Katu Rasa*, *Theekshna* and *Ruksha Guna*, *Ushna Veerya* and *Katu Vipaka* which helps to pacify the vitiated *Kapha Dosha*. Therefore, *Lakshadilepa* prepared with juices of *Toddalia asiatica* and *Curcuma domestica* is effective in treatment of diseases occurred by vitiation of *Vata* and *Kapha Dosha* including *Grudhrasi* (Sciatica).

**Table 3: Percentage of reduction of Symptoms**

Symptom	Before treatment	After Vasti Karma		After completion of entire treatment	
	Grade	Grade	Percentage of relief	Grade	Percentage of relief
<i>Prusta Sthambha</i> (stiffness in back)	4	2	50%	0	100%
<i>Kati Sthambha</i> (stiffness in lumbar region)	3	0	100%	0	100%
<i>Janga Sthambha</i> (stiffness in calves)	4	0	100%	0	100%
<i>Pada Sthambha</i> (stiffness in foot)	4	3	75%	0	100%
<i>Prusta Ruk</i> (pain in back)	4	3	75%	0	100%
<i>Kati Ruk</i> (pain in lumbar region)	4	3	75%	0	100%
<i>Spick Ruk</i> (pain in buttocks)	4	2	50%	0	100%
<i>Janga Ruk</i> (pain in calves)	4	2	50%	0	100%
<i>Pada Ruk</i> (pain in foot)	4	2	50%	0	100%
<i>Kati Toda</i> (piercing pain in lumbar region)	4	2	50%	0	100%
<i>Spick Toda</i> (piercing pain in buttock)	4	2	50%	0	100%
<i>Uru Toda</i> (piercing pain in thigh)	4	2	50%	0	100%
<i>Janga Toda</i> (piercing pain in calves)	4	2	50%	0	100%
<i>Tandra</i> (drowsiness)	2	0	100%	0	100%
<i>Gaurava</i> (heaviness of the body)	3	0	100%	0	100%
<i>Aruchi</i> (anorexia)	3	0	100%	0	100%

**Table 4: Ayurveda pharmacodynamic properties of ingredients of *Sepalika Niuha Vasti* and *Tila Taila Anuvasana Vasti***

<i>Vasti</i>	Ingredients	<i>Rasa</i>	<i>Guna</i>	<i>Veerya</i>	<i>Vipaka</i>
<i>Niruha</i>	<i>Nycanthes arbortristis</i>	<i>Thikta</i>	<i>Guru Ruksha</i>	<i>Sheetha</i>	<i>Katu</i>
	Bee's honey	<i>Madhura</i>	<i>Guru Snigdha</i>	<i>Sheetha</i>	<i>Madhura</i>
	<i>Sahindava Lavana</i>	<i>Lavana Madhura</i>	<i>Laghu Snigdha</i>	<i>Sheetha</i>	<i>Katu</i>
	Sesame oil	<i>Madhura</i>	<i>Guru Snigdha</i>	<i>Ushna</i>	<i>Katu</i>
<i>Anuvasana</i>	Sesame oil	<i>Madhura</i>	<i>Guru Snigdha</i>	<i>Ushna</i>	<i>Katu</i>

**Table 5 : Ayurveda pharmacodynamic properties of *Sudulunu Sepalika Kashaya***

Plant	<i>Rasa</i>	<i>Guna</i>	<i>Veerya</i>	<i>Vipaka</i>
<i>Nycanthes arbortristis</i>	<i>Tikta</i>	<i>Guru, Ruksha</i>	<i>Sheetha</i>	<i>Katu</i>
<i>Allium sativum</i>	<i>Madhura, Katu, Lavana, Tikta, Amla</i>	<i>Snigdha, Theekshna, Pichchila, Guru, Sara</i>	<i>Ushna</i>	<i>Katu</i>

**Table 6 : Ayurveda pharmacodynamic properties of ingredients of *Lakshadilepa***

Ingredient	<i>Rasa</i>	<i>Guna</i>	<i>Veerya</i>	<i>Vipaka</i>
Laksha	<i>Kashaya</i>	<i>Laghu Snigdha</i>	<i>Sheetha</i>	<i>Katu</i>
<i>Rubia cordifolia</i>	<i>Kashaya, Tikta, Madhura</i>	<i>Guru, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>
<i>Glycyrrhiza glabra</i>	<i>Madhura</i>	<i>Guru, Snigdha</i>	<i>Sheetha</i>	<i>Madhura</i>
<i>Terminalia chebula</i>	<i>Amla, Katu, Kashaya, Madhura, Tikta</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Madhura</i>
<i>Allium sativum</i>	<i>Madhura, Katuka, Lavana, Tikta, Amla</i>	<i>Snigdha, Theekshna, Pichchila, Guru, Sara</i>	<i>Ushna</i>	<i>Katu</i>
<i>Pterocarpus santalinus</i>	<i>Tikta, Madhura</i>	<i>Guru, Ruksha</i>	<i>Sheetha</i>	<i>Katu</i>

**Table 7: Ayurveda pharmacodynamic properties of *Toddalia asiatica* and *Curcuma domestica***

Plant	Rasa	Guna	Veerya	Vipaka
<i>Toddalia asiatica</i> [8]	Tikta	Ruksha	Ushna	Katu
<i>Curcuma domestica</i> [6]	Tikta, Katu	Laghu, Theekshna	Ushna	Katu

**Conclusion:**

It is concluded that *Sepalika Niruha Vasti* followed by oral administration of *Sepalika Sudulunu Kashaya* and external application of *Lakshadilepa* mixing with juice of *Toddalia asiatica* (*Kudumirissa*) and *Curcuma domestica* (*Kaha*) are effective in treatment of *Grudhrasi* (sciatica).

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