

## KATI-VASTI IN THE MANAGEMENT OF GRIDHRASI WSR TO SCIATICA- A REVIEW ARTICLE

Sandeep Kumar Shrivastava<sup>1</sup>, Deepak Ekka<sup>1</sup>, Aruna Ojha<sup>2</sup>, Ranjip Dash<sup>3</sup>

<sup>1</sup>PG Scholars, <sup>2</sup>Associate Professor, <sup>3</sup>Associate Professor,  
Dept of Panchakarma, Shri NPA Govt. Ayurved College, Raipur, Chhattisgarh, India

Email: [drsandeepshrivas@gmail.com](mailto:drsandeepshrivas@gmail.com)

### ABSTRACT

Today *Gridhrasi* (sciatica) is very common problem. In this condition pain is distributed in sciatic nerve or its component nerve roots. The syndrome is now accepted as being caused by lumbar disc prolapsed. However, sciatic nerve lesions can occur due to pressure in the buttock or upper part of thigh. Sciatica is a relatively common condition with a lifetime incidence varying from 13% to 40 %.The common corresponding annual incidence of an episode of sciatica ranges from 1% to 6%.Male are more frequently affected than women. *Ayurveda* has the privilege of offering the best remedies for low back pain and related painful conditions. Among all the remedies available for low back pain, *kativasti* is the most popular one. People who have taking *kativasti* would definitely tell you how the symptoms are decreases or subsided. So we can called it is magical treatment of Ayurveda.

**Keywords:** Gridhrasi, *Kativasti*, *ayurveda*, *asthi*, *sandhi*.

### INTRODUCTION

In *ayurvedic grantha charak samhita chikitsa sthan 28* describes *Gridhrasi* (Sciatica)–*Sphicpoorva kati pristha uroo janu jangha padamkramata* <sup>1</sup> pain felt down the back and outer side of the thigh, leg and foot. It is usually caused by degeneration or herniation of intervertebral disc<sup>2</sup>, which protrudes laterally to compress the lumbar or an upper sacral spinal nerve root. The onset may be sudden, brought on by a lifting or twisting movement. The back is stiff

and painful. There may be numbness and weakness in the leg. Patient with sciatica usually have a more persistent and severe type of pain than patient with low back pain ,have a less favorable outcome, consume more health resources, and have more prolonged disability and absence from work.<sup>3,4,5</sup>

#### DEFINITION-

Sciatica is characterized by a sharp shooting pain running down of thigh, knee, calf and feet

in sequence with *suptata* (numbness). Movement of limb generally intensifies the suffering. Sciatica arises to compression or trauma of the sciatic nerve (L4,L5,S1) or its roots, especially that resulting from ruptured intervertebral disc or osteoarthritis of lumbo sacral vertebrae. Also known as Rheumatism of the loins.<sup>6</sup>

#### SCIATIC NEUROPATHY –

Sciatic neuropathies commonly complicate hip arthroplasty, pelvic procedures in which patients are placed in a prolonged lithotomic position, trauma, hematomas, tumor infiltration, and vasculitis. In addition, many sciatic neuropathies are idiopathic. Weakness may involve all motion of the ankles and toes as well as flexion of the leg at the knee; abduction and extension of the thigh at the hip is spared. Sensory loss occurs in the entire foot and the distal lateral leg.<sup>7</sup>

#### EPIDEMIOLOGY-

The exact data of sciatica is not mentioned in any old *ayurvedic* classical book and modern text books. According to CCRAS (Central Council for Research in *Ayurveda* and Siddha) report Lower back pain is the most common presentation of lumbar spine disorder. In India present LBP is most common feature of sciatica. Males are mostly affected as compared to females. In which 62-69% are males and 31-38% are females. It is more prevalent in the month from May to July (Rainy season). *vataj prakriti* people are more prone to these diseases. The majority of disc herniation occurs at the L4-L5 or L5-S1 level, advancing age incidence of herniation at the L3-L4 or L2-L3 level.<sup>2</sup>

#### NIDAN- According to ayurveda<sup>8,9</sup>

**A.** *Aharjanyanidan -Rukshhaaharsevan, sheeta aharsevan, katu, tikta, kashayraspradhanaahar, adhyashan, vishmashan, asatmyaaahar.*

**B.** *Viharjanyanidan - Atyadhikvyavaye, atyadhikratrijagran, divasayan, upvas, abhighat, atibharvahan, chinta, sok, bhay, atimargagaman, mridusayya, asan etc.*

CAUSES- The major cause of sciatica is divided in two parts-<sup>10</sup>

1. TRUE SCIATIC NEURITIS - Polyarthritis nodosa, nerve injury due to injections or trauma, post-hepatic neuralgia.
2. MECHANICAL PRESSURE ON NERVE OR ROOTS OR REFERRED PAIN -
  - A.** In the spinal cord - Tumors of cauda equina, arachnoiditis, rarely thrombosis, haemorrhage or infection irritating meninges of the cord.
  - B.** In the cord space - protruded inter vertebral disc, extra medullary tumors.
3. In the vertebral column - Arthritis, tuberculosis, spondylolisthesis, ankylosing spondylitis, primary bone tumors, secondary carcinoma.
4. In the back - Fibrositis of posterior sacral ligaments. Compression where the nerve leaves the pelvis in those who lie immobile on a hard surface for long time.
5. In the thigh and buttock - Fibrositis, sacrosciatic band, hip joint or sacroiliac joint disease, neurofibroma, haemorrhage within or adjacent to nerve sheath in blood dyscrasias and anticoagulant therapy, misplaced therapeutic injection.
6. In the pelvis - Sacroiliac arthritis or strain, hip disease, infection of prostate or female genital tract, rectal impactions, tumors of lumbo-sacral plexus.
7. Lumbosacral spondylitis is a common cause.
8. Obesity
9. Piriformis syndrome - Piriformis syndrome is named for the piriformis muscles and the

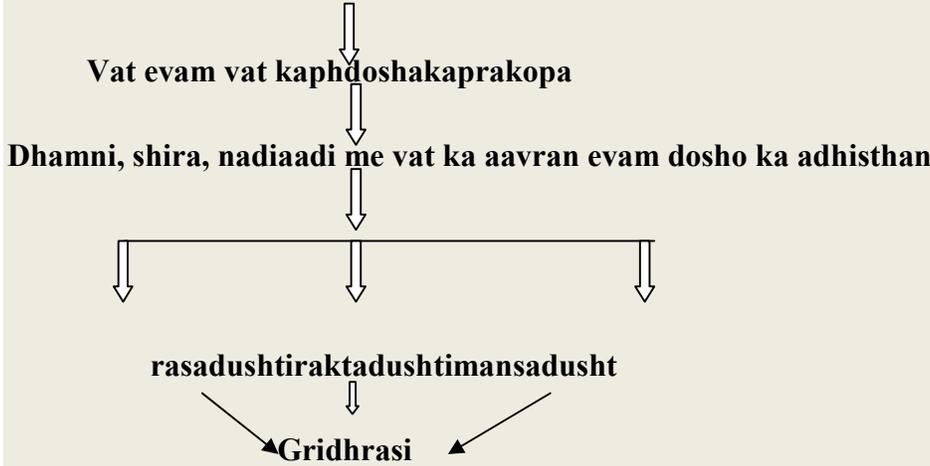
pain caused when the muscles irritates the sciatic nerve. The piriformis muscles located

in the lower part of the spine connects to the thigh bone and assists in hip rotation.

**SOME RISK FACTOR FOR ACUTE SCIATICA<sup>2</sup>-**

S.N.	Personal factors
1.	Age (Peak 45-64 years)
2.	Increasing risk with height
3.	Smoking
4.	Mental stress
	<b>Occupational factors</b>
1.	Extremely physical activity- for example - long time sitting job, frequent lifting
2.	Driving, including vibration of whole body

**SAMPRAPTI<sup>8,9</sup> - Vividhvidanasevan**

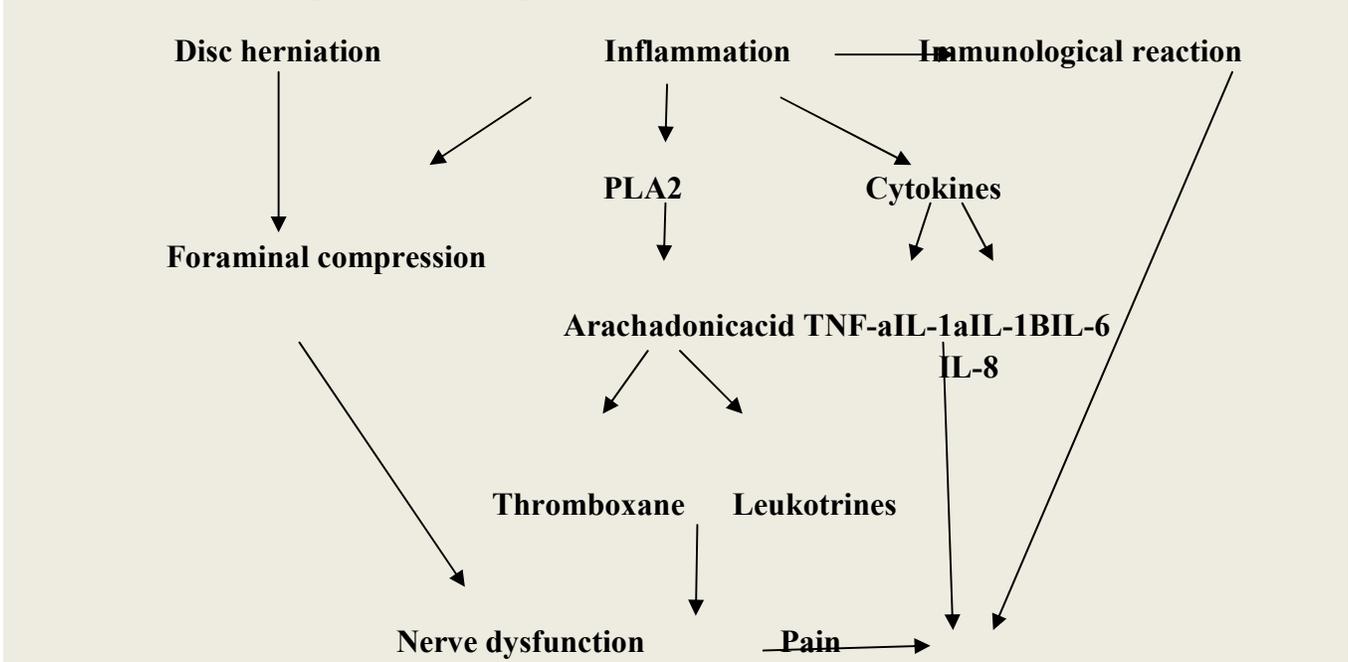


**PATHOLOGY-**

The intervertebral disc was implicated in the pathophysiology of sciatica<sup>11</sup> and with the assumption that the protruding disc exerted pressure on sciatic nerve roots; the treatment was surgical removal of the disc. Any subsequent improvement in symptoms was attributed to relief of pressure on the nerve roots. Kelly, however suggested that pressure on the nerve result in loss of function and is rarely associated with pain.<sup>12</sup> There are several lines of evidence to

support this. Disc pathology and stenosis with apparent neural compromise have been shown to be a relatively common finding in asymptomatic patients.<sup>13,14,15</sup> symptomatic patient with disc herniation may experience marked improvement in symptoms without any alteration of the original pathology,<sup>16</sup> where as the removal of herniated disc material or other cause of nerve root compression does not always relieves pain.

**Overview of the Pathogenesis of discogenic sciatica<sup>1</sup> -**



**SYMPTOMS AND SIGNS OF SCIATICA-**

according to ayurveda<sup>1</sup>

*Sphic poorva kati pristha urojanujanghapadamkramatgridhrasistambhar uktodgrihadatispandatemu*

**(Charakchikitsa 28)**

*Parsnipratyangullinam tu kandara yaanillardita/sakthana chhepam nigrihadiyad gridrasiti sa smrita*

**sushrut nidan (1/74)**

Some common symptoms are given as follows<sup>17</sup>

1. Some people have sharp pain in one part of the leg or hip and numbness in other parts.
2. Affected leg may feel weak.
3. Tingling sensation, numbness, burning sensation.
4. Redness and swelling on the back side some time present.
5. Sometimes a sensation like an electric shock can be felt along the nerve.
6. Pain radiating to thigh or foot

**TREATMENT-**

1. *Nidan Parivarjan*<sup>18</sup>
2. *Sodhanchikitsa -abhyang, swedan, kativasti ,anuvasanvasti,niruhvasti*
3. *Samanchikitsa*

In *ayurveda kativasti* is the very effective treatment of sciatica.

**What is kati vasti<sup>19</sup>-**

The Term *kativasti* has formed by 2 words -

*Kati-* means low back

*Vasti-* means to hold

Thus *kativasti* means a treatment in which medicated oils are poured and pooled for a fixed duration of time in a affected area over the low back area covering the Lumbo- sacral and sacroiliac joints.

In simple words, this therapy is pain reliving oil pooling treatment conducted for low back pain. Some condition *kativasti* are beneficial for example - low back pain, lumbar spondylosis, sciatica, sacro iliac joint pain or dysfunction,

intervertebral disc prolapse or lumbar disk disorder.

### **How is *kativasti* done?**

*kativasti* is done following method-

#### **Poorva karma**

**1. Preparation of the patient:** - The patient examined their prakriti, vikriti are documented in detail. We also evaluate the bowel and reduce the pressure over the back side.

For *kativasti* (oil pooling) use-A. Medicated oil like *mahanarayan tail*, *mahavishgarbhatail*, *Mahamasha tail*, *sahcharadi tail*, *prasarini tail*, *ksheerbala tail* etc. the same medicated oil are use in *abhyanga*. Then, *swedan -sarvanga or nadiswedan*.

B. Black gram (Udad dal aata) -1kg

C. Water, stove, bowls, spoon etc.

D. Sterile cloth.

#### **Pradhan Karma<sup>19</sup> (treatment proper)-**

**Position of the patient** - *kativasti* is done in the early morning.

Ask the patient to come empty stomach because, while doing *kativasti*, the patient has to sleep in prone position (on stomach).

**2. Preparation of *kativasti***- Black gram flour (*udad dal aata*) is taken in sterile bowl mix with water and form bolus. We made a ring by this bolus & put on the lumbar vertebrae (low back bones), the sacroiliac joints and coccyx (tail bone) within it. The height of the ring should be at least 5-6 inches. The junction of the ring and skin is sealed with flour. A small amount of oil is poured in the ring of flour and checked for leakage. If not leakage *kativasti* should be started.

**Method of oil pooling:** - the chosen medicated oil is heated passively. Required quantity of oil (sufficient enough to fill the space within the ring) is taken in a small bowl. The bowl oil

warm in stove or warm water. When the oil gets warm, the bowl is removed; the oil is poured into the lumbar region. This procedure is done in 30-45 minute.

#### **Paschat Karma -**

Removal of oil after 30-45 minute .the oil is slowly remove and stored in the bowl or bottle. On the next day the same oil shall be reused after adding some more oil to replace the quantity consumed for treatment procedures on the previous day. The whole oil shall be replaced on the 4<sup>th</sup> day of the treatment. Actually it is good to take new oil every day but practically it unaffordable for some patient. *kativasti* ring also removed.

**Duration of the courses** - *kativasti* is done 7-14 days depending on the nature and intensity of the disease.

#### **CLINICAL EXAMINATION AND DIAGNOSIS OF SCIATICA-**

Sciatica is mainly diagnosed by history taking and physical examination. Patient complains radiating pain in the leg. Physical examination largely depends on neurological testing. The most applied investigation is the straight leg raising test or lasegue's sign. The duration, quality, severity and location of pain all are important in a detailed history.

#### **Spine examination -**

The herniation of intervertebral lumbar disc most often occurs between L4-L5 and L5-S1 with irritation and compression of L5-S1 root, respectively, it is important to recognize the clinical characteristics of lesion of these two roots. If a patient complains of pain in the hip region, groin, posterior lateral thigh, lateral calf muscles radiating to the external malleolus or

dorsal surface of the foot, the first or second and third toes indicate L5 nerve root compression.

Straight leg raising (SLR) -The SLR test may be positive in- Intraspinous lesions- Protrusion

Non-discogenic

- Tumour
- Neuroma

#### Extraspinal lesions

- Sacroiliac joint lesions
- Major lesions at the buttock- Major lesions at the hip joint
- Non- organic disorders

#### Laboratory Investigation<sup>3</sup>-

1. CBC
2. Percentage of Hemoglobin
3. ESR
4. Urine examination
5. Human leukocyte antigen (HLA) B-27
6. Immunoglobulin
7. Calcium phosphate
8. Alkaline phosphate
9. CT-Scan (Computed tomography)
10. MRI (magnetic resonance imaging)

#### DIFFERENTIAL DIAGNOSIS OF CONDITION CAUSING GRIDHRASI (SCIATICA)<sup>7</sup>

According to *ayurveda* Gridhrasi is differentiated following diseases

1. *katishool*
2. *sandhivat*

**A.** Disc lesion

**B.** Spondylolisthesis- When spondylolisthesis cause intrinsic symptoms backache after prolonged standing, or bilateral sciatica.

**C.** Attrition of disc - Full approximation of the vertebral bodies' following attrition of disc allows posterior longitudinal ligament to be unduly long. Sciatica caused by standing due to compression causing posterior bulge of the disintegrated disc which is pushed

back into position when posterior longitudinal ligament is toughened by lying down. X-ray - diminished joint space with marked anterior beaking at the affected level.

**D.** Sacro-iliac arthritis- Alternation of pain significant i.e. pain comes in one buttock and posterior thigh, and then it transfers itself to the other side. Signs of involvement of 1st and 2nd sacral segments.

**E.** Secondary deposits in spine- Gradually increasing central backache, tendency to radiate to lower limb, soon to both. Marked limitation of movements at lumbar spine. SLR of full range through painful at the extreme. Multi radicular signs in lower limbs. Muscles weakness bilateral, unequal and marked Spinal tenderness.

**F.** Benign spinal tumors -Progressive increase in symptoms. Neurological signs more severe and progressive than in disc lesion.

**G.** Major lesion in the buttock - Such as acute osteomyelitis of ilium or upper femur, ischio-rectal abscess pointing into buttock, septic gluteal bursitis. Straight leg raising and hip flexion both very painful.

**H.** Arthritis of the hip- hip movements restricted and pain provoked by passive movements.

**I.** Intermittent claudication - When internal iliac artery is affected alone, claudication in gluteus maximus on walking may be the only symptom.

If loss of function of lower limb with leaning of the patient on side the lesion, presence of lasegue's sign, tenderness along the course of sciatic nerve it is due to *gridhrasi* (sciatica).

#### DISCUSSION –

*Gridhrasi* is disease by vitiation of *vata* in *asthi* and *sandhi* or due to compression, irritation or

inflammation of the sciatic nerve in the greater sciatic notch or lumbo sacral region that result in radiation or pricking pain, stiffness and numbness to lower limb but when *kapha* gets involved with *vata* stupor, heaviness of the body and anorexia are also associated with the above said complaints. *gridhrasi* can be compared with the 'sciatica'. Sciatica is commonly associated with the rupture of a portion of an intervertebral disk into the spinal canal. It may also develop as a symptom of some of some local compressive lesion, or it may indicate a more generalized disorder involving the peripheral nerves.

*Kati vasti* Relieves pain in lumbar region and lower limb. It also Relieves stiffness in lumbar region and reduces swelling, inflammation in the low back, in the bones. It Improve movements and strengthens at the back and lower limbs and work freely.

Patients suffering from sciatica symptoms should be examined for the following condition: Spondylosis, osteomyelitis, osteoporosis, spinal epidural abscess, herniated lumbar disk, hyperparathyroidism and neurological disease. Occupational, social and psychological factor also must be taken in history taking. For example; job dissatisfaction can sometimes adversely affect the prognosis. All factors should be considered in a proper manner.

SLR becomes once again of full range at the same time as cutaneous analgesic and loss of power and reflexes supervene.

Kati vasti treatment is very effective treatment for lower backache. Waist area of the body is called kati. Holding warm ayurvedic oils on the affected area (lower back or other parts of the spine) is called vasti.

Luke warm medicinal oil around 200-300 ml is slowly poured into it. Oil is kept on for 30-40 minutes.

These kati vasti alleviates numbness due to sciatic nerve compression & most types of low back pain, strengthens back muscles which maintain normal curvature of the spine, bone tissue, it also increases the circulation in the region & highly effective in inflammatory conditions. It also improves mobility of the spinal vertebrae. It can be taken as a preventive treatment as a preventive treatment also. It helps avoid problems related to back and keeps your spine healthy. As medicated oil gets deeply absorbed into the skin it both nourishes and strengthens the muscles and nerves.

## CONCLUSION:

The disease *gridhrasi* is a *Vataja Nantmaja Vyadhi* described by almost all the *ayurvedic* literature. This disease result from irritation of the greater sciatic nerve commonly due to prolapsed intra vertebral disc, other changes may be osteophytes, secondary fibrosis, tumor or due to injury. *Ayurveda* is playing an important role towards the betterment of human health. *Gridhrasi* is a chronic disorder which affects both the sex. Maximum symptoms of *gridhrasi* are similar to sciatica. In *Gridhrasi* (sciatica) *Kativasti* by *mahanarayantail* has got excellent action.

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