

## AYURVEDIC PROSPECTS TO SCIATICA

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Article Received on 08/07/2017

Article Revised on 28/07/2017

Article Accepted on 18/08/2017

**ABSTRACT**

Sciatica is a neuralgic pain which begins from lumbar region and radiates downwards to buttock, posterior aspect of thigh, calf and to the outer boarder of foot. In about 90% of cases sciatica is caused by a herniated disc with nerve root compression, but lumbar canal stenosis and less often tumors are possible causes. A few personal and occupational risk factors for sciatica are age, height, mental stress, cigarette smoking and exposure to vibration from vehicles. Sciatica is mainly diagnosed by history taking and physical examination. The peak incidence is between middle-old aged and is higher in men than women. The most applied clinical examination is the straight leg raising test or Lasègue's sign. Conservative treatment for sciatica is primarily aimed at pain reduction, either by analgesics or by reducing pressure on the nerve root. Non-steroidal anti-inflammatory drugs, muscle relaxants, epidural injections of steroid might be effective in patients with acute sciatica. In Ayurveda, the symptoms, etiopathogenesis resembles with Gridhrasi. Treatment includes sequential administration of snehana, swedana, basti, sira vyadha, agni karma and certain shaman yogas.

**KEYWORDS:** Ayurveda, Gridhrasi, Sciatica, Nanatmaja Vata Vyadhi.**INTRODUCTION**

Sciatica is a neuralgic pain referred to the muscles supplied by the sciatic nerve. It is a more common cause of pain and disability. Pain is the distribution of the lumbar or sacral root is often due to disc protrusion. Pain and limitation on SLR is a feature of prolapsed inter vertebral disc, when there is irritation or compression of one of the root of sciatic nerve. It is now become well known even among the laymen, as sciatica. As the advancement of busy professional and social life, improper sitting postures in offices, factories etc. created undue pressure to the spinal cord. Continuous and over exertion, jerking movements during traveling and sports are also playing the part in producing neuralgic pain. In this way this disease is now becoming a significant threat to working population. Likewise, progressive disorders affecting the pelvis and nearer structures are also precipitating this condition. In an overall assessment major number of patients presented to the hospital has some symptoms related with pain on low back and legs. A symptomatic lumbar disc herniation occurs during the lifetime of approximately 2 % of population. Risk factor includes male gender, middle-old age, heavy lifting or twisting, stressful occupation, smoking and mental stress. Symptoms typically commences with a period of back pain followed by radiating down to buttock, thigh, calf and antero-lateral aspects of foot. There may be parasthesia, motor weakness, loss of reflexes and

reduction in SLR. Pain is exacerbated by coughing or straining. Sciatica hampers the daily routine activity and patient has to suffer a lot. The medical treatment and management includes bed rest, maintaining mobility, analgesics or NSAID, epidural steroid injections, spinal manipulation, traction therapy, physical therapy, multidisciplinary treatment or surgery in later course of the disease.

In Ayurveda, the symptoms, etiopathogenesis resembles with Gridhrasi. The name itself indicates the way of gait shown by the patient due to extreme pain just like a Ghridhra(Vulture). Gridhrasi comes under 80 types of Nanatmaja Vatavyadhies. The cardinal signs and symptoms of Gridhrasi are ruk (pain), sthamba (stiffness), toda (pin prickling sensation) starting from spik, kati, prista radiating down to posterior border of uru, janu, jangha, pada and impairment of lifting of thigh. In kaphanubandha, tandra, gaurva, arochaka are present. According to Acharya Sushruta and Vagbhat the condition where the Kandara of heel and Parsnee and Angulees are affected by vitiated Vata causing Sakthik shepanigraha, restricted lifting of the leg. Acharya Charaka has mentioned two types of Gridhrasi, Vataja and Vatakaphaja. In Kaphanubandhi Gridhrasi, Tandra, Gaurava, Arochaka are present. Treatment includes snehana, swedan, basti, siravyedha, agnikarma and shamanaushadhi comprises vednasthapana, rasayana and nadibalya drugs.

### Concept of Sciatica (Gridhrasi) in Ayurveda

'Gridhrasi' it can be learnt that any Abhighat affecting the lower part of the spinal cord can produce this disease. But then even mild stress induced in the above part can make considerable alterations in the functions of locomotorsystem. This may predispose the conditions similar to 'Gridhrasi' in due course. A variety of Vatavyadhies described in Charaka Samhita are divided into Samanyaja and Nanatmaja. Gridhrasi comes under 80 types of Nanatmaja Vatavyadhies. As far as aetiopathology of Gridhrasi is concerned 'Vatavaigunya' is important. It essentially plays a role in the over stimulation of the nerve as experienced by severe pain in the course of affected part.

In Ayurveda, diseases are named by different ways e.g. according to Dosha Dushya involved, according to symptoms etc. Here the word Gridhrasi is suggestive of the typical character of pain and also the gait of the patient. Further as in this disease the patient walks like the bird Grudhra and his legs become tense and slightly curved so due to the resemblance with the gait of a vulture. Grudhra (vulture) is fond of meat and it eats flesh of an animal in such a fashion that it deeply pierce its beak in the flesh then draws it out forcefully, exactly such type of pain occurs in Gridhrasi and hence the name "Grudhramapisyati", 'Syati'-as-'Kshepana'.

The disease Gridhrasi is said to cause an abnormal throwing action in the affected leg. The Sanskrit word Syaati in Gridhrasi means throwing action. By this abnormality the gait of the patient is said to resemble the gait of bird vulture and hence the name Gridhrasi to this unique illness.

### Nidana

There are no specific Nidanas (Hetu) of Gridhrasi, have been mentioned in literature. As Gridhrasi is Vata Nanatmaja Vyadhi, general hetus of Vata Vyadhi are explained, out of which some are responsible in the manifestation of Gridhrasi.

**Aharaja:** Ruksha, Sheeta, Alpa, Laghu Anna Adhyasan, Alpasana, Kathin Bhojana, Ritu Viparitahara, Mityahara, Dhatu-kshyakara, Satmya Viparita, Katu dravya Atisevana.

**Viharaja:** Visamachesta, Ati vyavaya, Ati vyayama, Vega sandharana, Vismasana, Dukhashayya, Diwaswapna, Ratri Jagarana, Pradhavana, Aticheshta.

**Agantuja:** Marmaghata, Abhighata, Prapatana, Prapidana, Paraghata.

### Sciatic Nerve – Anatomical Features

The sciatic nerve is the longest nerve in the body. Sciatic nerve is the main terminal branch of the sacral plexus which is formed by L5, part of L4 & S1, S2, S3 spinal nerves. It is 2 cm broad and passes through lumber 3-4<sup>th</sup>, 4-5<sup>th</sup>, 5<sup>th</sup>-1<sup>st</sup> sacral, 1<sup>st</sup>-2<sup>nd</sup>, and 2<sup>nd</sup>-3<sup>rd</sup> inter-vertebral

joints. Each sciatic nerve is composed of above five smaller nerves that leaves the spinal cord via the greater sciatic foramen below the pyriformis and descends between greater trochanter and ischial tuberosity along the back of thigh, dividing into the tibial and common peroneal nerve. The muscles of the limbs are under the control by motor neurons and impulses are conducted from corresponding area to the CNS by sensory neurons. When these nerves are irritated or affected by the inflammation of nearby soft tissues, refer as sciatica.

### Distribution of Sciatic Nerve

**Motor distribution.** A) Hamstring in the thigh. B) The superficial and deep muscles of the calf by the medial popliteal and the posterior tibial. C) The sole muscles by the medial and lateral plantar nerves. D) The peronei by the superficial peroneal. E) The anterior compartment by the deep peroneal.

**Sensory distribution.** A) The entire sole. B) The dorsum of the foot. C) The lateral aspect of the leg and lateral half of the calf. The medial side of the calf and foot are spared. If the posterior cutaneous nerve of the thigh is involved, there is numbness at the back of the thigh.

### Purvaroop

Avyakta Lakshanas are Purvarupa of VataVyadhi. Chakrapani says that Avyakta means mild symptoms are to be taken as a Purvarupa.

Gridhrasi is a Vata Vyadhi and Vata being Ashukari, Sukshma and Chala so the Purvarupa of Vata Vyadhi are unstable. The Purvarupas also depend upon Prakruti, Dushya, Desha, Vaya, Kala, Bala, Satva, Satmya etc.

### Roopa

In general a radiating pain emerging from lumber region and radiating towards buttock and goes down to the foot and along the course of sciatica nerve, is a cardinal symptom of Gridhrasi.

According to Charaka, the symptoms of Gridhrasi In Vataja type

- Stambha (stiffness)
- Ruka (pain)
- Toda (pricking sensation)
- Muhuspandanam (tingling)

In Vata-kaphaja type of Gridhrasi

- Tandra
- Gaurava
- Arochaka

According to Sushruta and Vagbhatta, Sakthanah Kshepam Nigriharniyata that means restricted movements of lower extremities is the symptom of Gridhrasi.

According to Madhavakara, Dehapravakrata i.e. scoliosis is symptom of Vataja type of Gridhrasi and Agnimandya,

Mukhapraseka are the symptoms of Vata-Kaphaja type of Gridhrasi.

#### Samprapti Ghataka

<b>Dosha</b>	- Vata
<b>Dushya</b>	- Asthi, Majja
<b>Srotasa</b>	- Asthivaha, Majjavaha
<b>Srotodushti Prakara</b>	- Sanga, Margavarodha
<b>Adhithana</b>	- Sphika, Kati, Uru, Janu, Jangham, Pada
<b>Vyakta Rupa</b>	- Ruka, Toda, Stambhain Adhosakthi, Uru, Janu, Jangha and Pada, Arochaka, Tandra, Gaurava

#### Chikitsa

Gridhrasi is one of the Nanatmaja Vata Vyadhi hence the general treatment of Vata Vyadhi can be applied. Some Acharyas have also mentioned some specific line of management for it.

**Snehana:** According to various Acharyas, internally as well as externally Snehana may be useful in the management of Gridhrasi.

**Swedana:** Bashpasweda, Nadisweda, Pindasweda, Valukasweda, Rukshasweda can be used.

**Vamana:** Bhavaprakasha and Chakrapani indicated Vamana therapy followed by careful Purvakarnas and this treatment is helpful in especially Vata-Kaphaja type of Gridhrasi.

**Virechana:** Virechana is most useful in the management of Gridhrasi due to correction of Vata Dosha Gati i.e. Anuloma Gati.

**Basti:** Basti is indicated for the management of Gridhrasi as Basti is the superior treatment for the management of Vata Vyadhi.

**Siravedha:** Charaka explained Siravedha at the site of Antara-Kandara-Gulpha. Acharya Sushruta and Vagbhatta indicated Siravedha four Angula above and four Angula below at the site of knee joint.

**Agnikarama:** For treatment of Gridhrasi different site are as mentioned below:

\***Charaka:** Antara Kandara Gulpha

\***Charkradatta:** Pada Kanistika Anguli (little toe of the affected leg).

\* **Harita:** Four Angula above the Gulpha in Tiryak Gati.

Mostly in practice where pain is more prominent primarily, Agnikarma Chikitsa can be done. In Gridhrasi, generally pain occurs in Kati Pradesha (Kukundar marma), Uru Marma, Janu Marma and Gulpha Marma Pradesha.

#### Shamana

In Shaman Chikitsa Deepana and Pachana Chikitsa is most useful. Our Acharya mentioned some Chikitseeya Yoga for oral medication.

- Rasna Guggulu
- Amruta Guggulu
- Sephali Patraka Kwatha
- Lahasuna Kshira Paka

#### DISCUSSION

Sciatica is a neuralgic pain which begins from lumbar region and radiates downwards to buttock, posterior aspect of thigh, calf and to the outer boarder of foot. In about 90% of cases sciatica is caused by a herniated disc with nerve root compression, but lumbar canal stenosis and less often tumors are possible causes. A few personal and occupational risk factors for sciatica are age, height, mental stress, cigarette smoking and exposure to vibration from vehicles. Sciatica is mainly diagnosed by history taking and physical examination. The peak incidence is between middle-old aged and is higher in men than women. The most applied clinical examination is the straight leg raising test or Lasègue's sign. Conservative treatment for sciatica is primarily aimed at pain reduction, either by analgesics or by reducing pressure on the nerve root. Non-steroidal anti-inflammatory drugs, muscle relaxants, epidural injections of steroid might be effective in patients with acute sciatica.

Gridhrasi is a shula pradhan vata nanatmaja vyadhi affecting locomotor system and leaving the person disable from daily routine activity. The name itself indicates the way of gait shown by the patient due to extreme pain just like a Ghridhra (Vulture). In the pathogenesis of disease, important components are vata and kapha. The vitiated vata gets lodged in katipradesh. The cardinal signs and symptoms of Gridhrasi are ruk (pain), sthamba (stiffness), toda (pin prickling sensation) starting from spik, kati, prista radiating down to posterior border of uru, janu, jangha, pada and impairment of lifting of thigh. In kaphanubandha, tandra, gaurva, arochaka are present. According to Acharya Sushruta and Vagbhat the condition where the Kandara of heel and Parsnee and Angulees are affected by vitiated Vata causing Sakthik shepanigraha, restricted lifting of the leg. Acharya Charaka has mentioned two types of Gridhrasi, Vataja and Vatakaphaja. In Kaphanubandhi Gridhrasi, Tandra, Gaurava, Arochaka are present. Treatment includes snehana, swedan, basti, siravyedha, agnikarma and shamanaushadhi comprises vednasthapana, rasayana and nadibalya drugs.

#### CONCLUSION

It can be concluded that herniated disc with nerve root compression, lumbar canal stenosis, muscle strain, trauma, tumor and some occupational risk factors are triggering factors of this disease. Thus the approach of Ayurveda in this field is essentially preventive and the

medicines can be provided permanent and better cure for the disease.

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