

A REVIEW ARTICLE ON GRIDHRASI W.S.R TO SCIATICA

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**ABSTRACT**

Gridhrasi is a *shoolapradhanavyadhi* and it is considered one of the eighty types of *Vatajananatmajavikaras*. It afflicts *adhakaya* and hampers the *gati* of the patient resulting in disturbed daily routine activities. The name itself indicates the painful character of this disease. *Sakthi utkshepanigrahana* is an important feature to differentiate this disease. This condition can be related to sciatica in which pain radiates from the low back to the buttock along the postero-lateral aspect of the lower limb. The conventional treatment for sciatic pain is limited to analgesics and anti-inflammatory drugs. Whereas a wide range of effective treatments both internal and external has been mentioned in Ayurveda. This is a simple attempt to analyze the disease *Gridhrasi* with respect to Sciatica.

Keywords: Gridhrasi, Sciatica

INTRODUCTION

Gridhrasi is one among the *Vatajananatmaja vikaras*¹. The derivation of the word *Gridhrasi* has got various interpretations based on the gait of the patient or the pain felt by them. It is said that the pain is similar to that experienced by the prey when it gets pierced by a vulture. The *gati* of the patient resembles

that of a *Gridhra* which can be related to the limping gait in Sciatica.² *Gridhrasi* is a condition in which the patient experiences *sthamba, ruk, toda*, and *spandana* over the *sphik, kati, prushta, uru, janu, jangha*, and *pada* in an order as described by *Acharya Charaka*³. *Susrutacharya* and *Vagbhatacharya* explains *Sak-*

thiutkshepanigraha as a clinical feature which means restricted leg raising⁴. This can be related to the straight leg raising test used in the diagnosis of Sciatica. Specific *nidana* for *Gridhrasi* is not mentioned in any of the classical literatures. As it is a *Vatavyadhi*, *samanyavatavyadhinidana* and *vataprakopakarana*'s can be considered as its *nidana*. *Vatavyadhinidana* has been described in detail by *AcharyaCharaka*.

The term 'Sciatica' is derived from the Greek word 'Ischion' and a Latin word 'Ischiadicus' which means pertaining to the hip joint or hip pain (Lars Gr).⁵Sciatica is a syndrome characterized by pain radiating from the low back into the buttock and along the posterior or lower aspect of the lower limb⁶. (Do.M)Most commonly caused due to the protrusion of the degenerated L5-S1 disc that impinges upon the S1 nerve root. Various terms like Lumbar disc protrusion, Sciaticneuralgia or neuropathy, Cotugno disease, etc have been attributed as synonymous to Sciatica. The factors which affect the integrity of the lumbar spine like lifting heavy weights, sudden jerky movements to the lumbar region, and sudden or heavy fall hitting the gluteal region or low back are considered to be the main causative factors. The lesions like a lumbar canal or foraminal stenosis, tumors affecting the lumbar spine, hemorrhage, abscesses, fracture, cysts, etc are some of the conditions leading to Sciatica.

Rationale and Background

The importance of low back-related disorders in the industrial world cannot be over-emphasized. The lifetime incidence of this condition is estimated between 13% and 40%⁶. It is most commonly found in people

of age 25 to 45 years. The medical interest in low back pain and Sciatica rose after the rediscovery of the herniated intervertebral disc by Mixter and Barr during the 1900s. It is the most common disorder which affects the locomotory system, particularly in one's productive period of life. As it causes limitations in daily life activities, it must be diagnosed earlier, and appropriate management must be undertaken. The conventional management of Sciatica is limited to analgesics, anti-inflammatory drugs, and muscle relaxants in mild cases and Surgical management like Laminectomy, discectomy, etc is advised in chronic cases with severe neurological deficit. Whereas Ayurvedic management includes the administration of oral medications, *Snehana*, *Swedana*, *Shodhana*, *Vasti*, *Agnikarma*, and *Raktamokshana* like procedures.

AIM

To study the *nidana*, *samprapti*, and *lakshana* of the disease *Gridhrasi* and to relate it with Sciatica And thus to adopt the treatment measures described for *Gridhrasi* in treating Sciatica.

MATERIALS AND METHODS

The classical Ayurvedic textbooks like *Charaka Samhita*, *Susruta Samhita*, *Ashtanga Hridaya*, *Madhava Nidana*, etc, and all relevant databases were critically analysed for a better understanding of the etiology, pathogenesis, and clinical features of the disease.

REVIEW OF LITERATURE

The *Nidanapanchaka* of *Gridhrasi* with special respect to sciatica has been mentioned below.

*Nidana*⁷

Table 2: Causes of *Gridhrasi* and Sciatica

Factors	<i>Gridhrasi</i>	Sciatica
Ahara/Dietic	<i>Tiktakashaya rasa, rukshaushnalaghuguna, alpaprasmithabhojana, abhojana</i>	Avitaminosis, Calcium deficiency
Vihara	<i>Vega dharana/vegaudhirana, nishajagarana, atyadhwa, atyuchabhashana, ativyayama, aticheshta, dukhasayyaasanam, Abhighata, Gajoshtraashwashighrayanam, Divaswapna, ama</i>	Torsion movements-bending and rotation of the spine, lifting heavy weights when the spine is flexed, Continuous sitting posture, straining on defecation, Coughing, Sneezing, falls hitting the gluteal region
Manasika	<i>Chinta, shoka, krodha, Bhaya</i>	Anxiety, Tension, Fear, etc may lead to prolonged contraction of paraspinal muscles

Others	<i>Dhatu kshaya, Rogaatikarshana</i>	-
Kala	<i>Greeshma, ahoratribhukthaantham</i>	People working in the hot sweaty atmosphere when exposed to a draught or cold while he is overheated

Purvarupa

Acharya Charaka, in *Vatavyadhi chikitsaadhyaya* gives the reference “*avyaktamlakshanamteshampurvarupamitismritam*”. The *lakshanas* of *Gridhrasi* are shown as *alpa* and *avyakta*. In *Sciatica*, during the onset of the disease, the patient experienced repeated episodes of low back pain alone for several months or years.

Rupa

Table 1: Clinical Features of *Gridhrasi* and *Sciatica*

Features	<i>Gridhrasi</i>	<i>Sciatica</i>
Site of onset	<ul style="list-style-type: none"> Starts at <i>SphikPradesha</i>, radiates to <i>kati, prushta, uru, janu, jangha, and pada</i> According to <i>Harita Samhita</i>, <i>Kati uru-janumadye bahu vedana</i> 	<ul style="list-style-type: none"> Unilateral neuropathic pain extends from the gluteal region down the posterior aspect of the leg to the foot.⁸ Pain in the distribution of the sciatic nerve.
Nature of pain	<i>Ruk, Toda and Sthambha</i>	Aching, Severe, Sharp, Shooting, electrical, lancinating, Tingling type
Diagnostic feature	<ul style="list-style-type: none"> <i>Sakthi utkshepanigrahana</i> <i>Arunadatta</i> explains it as “<i>paadaudharaneashakti</i>” 	<ul style="list-style-type: none"> Straight leg raising (SLR) restricted
Types	<ul style="list-style-type: none"> <i>Vataja and vatakaphaja</i> <i>Vatakaphaja-Tantra, Gaurava, and arochakasaw</i> in addition to the general symptoms. 	<ul style="list-style-type: none"> Nervous and arthritic According to the level of nerve root compression
Aggravating factors	<ul style="list-style-type: none"> <i>Vatakaphavardhakaahara and vihara</i> <i>Vatavyadhinidanas and vataprakopakaranas</i> 	<ul style="list-style-type: none"> Active movement, Flexion of the spine, Coughing, Sneezing, Straining, Jolting and Jerking movements
Relieving factors	<ul style="list-style-type: none"> <i>Vatasyaupakrama-sneha, sweda, mridusamshodhana, etc</i> 	<ul style="list-style-type: none"> Lying flat with knees and hips flexed (Semi-Fowler position), Rest

The *lakshanas* of *Gridhrasias* described by *Charaka* can be related to the unilateral radiating pain experienced in *Sciatica*. *Madhava nidana, Yogaratnakara, Bhavaprakasha, and HaritaSamhita* explain some of the clinical features in addition to those described in *Brihatrayi’s*. While describing *VatajaGridhrasi* symptoms like *dehasyappravakrata, janu sandhi sphurana, katisandhi sphurana*, etc are described by *Madhava nidana, Yogaratnakara and Bhavaprakasha*. In *Vatakaphajagridhrasi, vahnimardava, mukhaprasaka and bhakta dwesha* are described in *Bhavaprakasha, Madhavanidana and Yogaratnakara. Staim-*

itya in VataKaphaja Gridhrasi is mentioned in *Harita Samhita*.

Samprapti-Pathogenesis

The main reason for all *Vatavyadhi isvataprakopa*. *Vataprakopa* occurs either due to either *Dhatukshaya* or *margavarana*. The *nidanas* like *abhighata to kati or sphikpradesha* due to *atyadhwa, gajaushtrayana, jerking or jolting movements, carrying heavy loads, etc.*, cause *srotodushti* at *katipradesha* resulting in *Gridhrasi*.

The *samprapti* can be either due to *apatarpana* or *santarpananidanas*.: -

Apatarpanajanya- Nidanas like *dhatu kshaya*, *rogaatikarshana*, etc leads to *vataprakopa*. This *prakupitavata* does *purana* of the *riktasthana* of *srotas* leading to *vatavyadhi*.

Santarpanajanya-Occurs due to *margavarana* by *kaphadosha*. *Nidanas* like *Divaswapna*, *ama*, etc cause *kaphaprakopa* and lead to *gatinirodha* of *vata*, thus leading to *vataprakopa*. Among the *panchavidhavata-Apana* and *vyanavata* is mainly involved in the *samprapti*. *Saktiutkshepanigrahana* is a feature in *gridhrasi* that clearly states the involvement of *vyanavata*, as the function of *vyanavata* is described as helping in *gatiapakshepana* and *utkshepana*. *Susrut Acharya* and *Vagbatacharya* describe the involvement of *kandara* of *parshni pratyanguli* in the *samprapti* of *Gridhrasi*.

Pathophysiology of Sciatica⁹

There are two main processes involved in the pathophysiology of this disease. They are: -

1. Mechanical compression of the nerve root
2. Release of inflammatory cytokines

The nerve roots are subjected to mechanical compression over the intervertebral foramen and mainly occur due to Lumbar disc herniation, Prolapsed intervertebral disc, Lumbar canal stenosis, Lumbar disc lesions, etc. Loss of lumbar lordosis and spasm to the paraspinal musculature also causes pressure on the nerve roots. It is mainly aggravated by trauma to the lumbar spine caused by: -

- a) Lifting heavy weights when the spine is in a flexed position
- b) Due to age-related reductions in proteoglycans present in the nucleus pulposus, hence more prone to mechanical forces.
- c) Degenerative changes in the spine
- d) Activities like heavy manual work, sudden jerky movements, and sudden or heavy falls hitting the gluteal or low back region

Due to this pressure, the nucleus pulposus may bulge out from the annulus fibrosis resulting from its tear and exerts pressure on the nerve roots. The injured nucleus pulposus releases inflammatory cytokines which result in pain and inflammation.

DISCUSSION

Gridhrasi is a disorder that affects *adhakaya* (mainly the locomotor system) and as a result, it hampers one's daily routine activities. The causative factors resulting in trauma to the low back, excessive traveling, jerky movements, etc. are illustrated in similar ways to relate *vatakopa* caused by actions like *atyadhwa*, *ativyayama*, *dukhasayyasana*, *yana*, etc. Low back pain radiating to the lower limb along the course of the sciatic nerve is explained in similar ways in both *Sciatica* and *Gridhrasi*. There is no detailed description of the *samprapti* of *Gridhrasi* but that mentioned for *Vatavyadhi* is adopted and a combination of both *Santharpana* and *Apatarpanajanya-samprapti* has been explained in detail. Likewise, *Sciatica* also involves a complex interplay of inflammatory, immunological, and nerve root pressure-related processes. Two types of *Gridhrasi* have been mentioned in *Ayurvedic* classics-*Vataja* and *Vatakaphaja*. Various classifications for *Sciatica* are also mentioned in some references but its detailed clarification is not found.

CONCLUSION

Thus, *Gridhrasi* in its *nidana*, *samprapti*, and *lakshana* are found to be similar with respect to the causative factors, clinical features, etc of *Sciatica*. Various kinds of literature were thoroughly reviewed including *Ayurvedic* and modern textbooks for relevant information. All of them emphasize this condition to lead to a serious one if not managed with adequate care and may lead to complications like crippling, etc. Hence the treatment adopted for *Gridhrasi* in *Ayurvedic* classics can be adopted for *Sciatica*.

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