

**EFFECT OF SAHACHARADI KASHAYAM IN THE MANAGEMENT OF SCIATICA
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ABSTRACT

About 40% of people have low back pain at some point of time in their lives with estimate as high as 80% among people in the developed world.^[1] It can be due to so many reason and one of the major cause is Sciatica. In Sciatica, specific type of pain is there which arises from low back and radiates to buttock, back of the thigh, outside and back of the leg and outer border of the foot. On the basis of sign and symptoms of Sciatica given in modern, it can be correlated with Gridhrasi in Ayurveda. Gridhrasi is one of the vatavyadhi and it is commonest disorder found in clinical practice and has been explained elaborately in Bruhatrayee.^[2] This condition is characterized by pain starts from kati and radiates down to Prishtha, Uru, Janu, Jangha and Pada respectively. In modern medicine Sciatica is generally managed symptomatically by using Anti-inflammatory drugs, muscle relaxants, exercises to improve muscle tone and posture along with surgical intervention in severe neurological deficit. But the anti-inflammatory drugs are having many side effects e.g. gastritis. Surgical procedures like laminectomy, discectomy are indicated but these surgical procedures are expensive with their limitations. These therapies have proven inadequate for many patients with sciatic pain, on the other hand there is global increasing demand of natural medicaments. In Ayurveda, various methods used in the treatment. In Sahastrayogam which is the compilation by unknown author or authors containing description of numerous preparations for vatavyadhi like Gridhrasi and many more, Sahacharadi kashayam is one of the yoga described for Gridhrasi.^[3] All the drugs included in Sahacharadi kashayam are having Vata-kapha shamaka, Vedanasthapana Shulahara, shothahara and Nadiuttejaka properties which is very much effective in the treatment of Sciatica. There is lack of knowledge on the scientific aspects of the role of this medicine. The present work is one step in understanding the possible mechanism of Anti-inflammatory, Analgesic activity of Sahacharadi Kashyam.

KEYWORDS: Sciatica, Gridhrasi, Sahastrayogam, Sahacharadi Kashayam.**INTRODUCTION**

With the advancement of food habits busy professional and sedentary life, conditions of the road, physical and mental stress which creates undue pressure on the spinal column and play an important role in producing low back pain, which is the common afflictions of adults costing billions of dollars in healthcare resulting in more lost days of work. About 40% of people have low back pain at some point of time in their lives with estimate as high as 80% among people in the developed world. Among them difficulty is seen in between 20-40 yrs of life and both sexes are equally effected. It can be due to so many reason and one of the major cause is Sciatica.

The term Sciatica designates a syndrome characterized by the pain beginning in the lumbo-sacral, spreading to

the lower limb through buttock, thigh, calf upto foot or a disorder characterized by pain in the distribution of the sciatic nerve. About 90% of case it is due to spinal disc herniation but other causes like spondylolisthesis, spinal canal stenosis, and piriformis syndrome like condition are also seen.^[4]

On the basis of sign and symptoms of Sciatica given in modern, it can be correlated with Gridhrasi in Ayurveda. Many classics have references regarding the disease. Variety of Vatavyadhi described in Charaka Samhita are divided into Samanyaja and Nanatmaja group. Gridhrasi is one among the 80 types of Nanatmaja Vatavyadhi though, occasionally there is Kaphanubandha.

According to our classics Gridhrasi is a condition characterized by pain starts from kati and radiates down

to Prishtha, Uru, Janu, Jangha and Pada respectively. Patient is unable to keep the leg straight that is Sakthikshepa Nigraha.

Acharya Charaka has mentioned in Chikitsasthana 28th chapter that in Gridhrasi, there is Ruka (pain), Toda (pricking sensation), Stambha (stiffness) and Mruhuspandana (twitching) in waist, hip, back of the thigh, knee, calf and foot respectively found in Vataja type and Tandra, Gaurava and Arochaka in addition to Vata-kaphaja type. Ch Chi. 28/56-57).

Acharya Sushruta has given the main symptom of this disease. He says that when the Kandara i.e. ligament of heel and all the toes are afflicted by vitiated Vata, movements of the lower limbs get restricted, that is known as Gridhrasi. It is important sign for the diagnosis of this disease.(Su. Ni.1/174)

Gridhra bird called as vulture is fond of meat and he eats flesh of an animal in such a fashion that he deeply pierce his beak in the flesh then draws it out forcefully, exactly such type of pain occurs in Gridhrasi and hence the name. Further as in this disease the patient walks like the bird Gridhra(Vulture) and his legs become tense and slightly curved so due to the resemblance with the gait of a vulture, Gridhrasi term might have been given to this disease.

On the basis of symptomatology given in classics, the probable Samprapti of Gridhrasi can be traced out as below.^[5]

Dosha - Vata – Especially Vyana and Apana, Kapha
Dushya - Rakta, Mamsa, Meda, Asthi, Majja, Sira, Kandara, Snayu
Srotasa - Raktavaha, Mamsavaha, Medovaha, Asthivaha, Majjavaha
Srotodushti Prakara - Sanga, Margavarodha
Agni - Jatharagni and Dhatwagni
Ama - Jatharagnijanya and Dhatwagnijanya
Udbhavasthana - Pakwashaya
Sanchara Sthana - Rasayanis
Adhithana - Kandaras of Parsani and Pratyanguli and Sphika, Kati, Uru, Janu, Jangham, Pada
Vyakta Rupa - Ruka, Toda, Stambha in Adhosakthi, Uru, Janu, Jangha and Pada, Arochaka, Tandra, Gaurava

In modern medicine Sciatica is generally managed symptomatically by using Anti-inflammatory drugs, muscle relaxants, exercises to improve muscle tone and posture along with surgical intervention in severe neurological deficit. Surgical procedures like laminectomy, discectomy are indicated but due to fear, high cost or complications of surgical treatment, patients avoid surgeries and continue with analgesics for instant pain relief, which produce many side effects e.g. Gastritis, Hepatotoxicity etc. These therapies have proven inadequate for many patients with sciatic pain, on the other hand there is global increasing demand of

natural medicaments. In the treatment of sciatica, various healthcare workers are now searching into source of alternative which is more natural, environment friendly, rich in valuable bioactivities E.g. Anti-inflammatory, Antioxidant, Antibacterial, Antiviral etc activities.

In Ayurvedic classics, there are wide range of so many special therapeutical procedures for specific disease along with thousands of medicaments. For Gridhrasi, Bheshaja, Snehana, Swedana, Basti, Siravedha, Agnikarma and Shastrkarma are advised by different Acharyas.^[6]

In Sahastrayogam which is the compilation by unknown author or authors containing description of numerous preparations for vatavyadhi like Gridhrasi and many more, Sahacharadi kashayam is one of the yoga described for Gridhrasi.

Sahacharadi Kashayam is a decoction prepared out of three herbal ingredients, namely Sahachara (Barleria prionitis), Devdaru(Cedrus deodara) and Sunthi (Zingiber officinale) in water.

This is used in the management of Vata related diseases like Sciatica, low back pain, disc prolapsed, facial palsy and paralysis. This Kashayam is administered at doses of 5 to 15 ml diluted with water to be taken twice a day before food or as advised by the physician. The tablet forms of this medicine are also available which are taken 1-2 tablets twice a day. The medicine is prepared by the three ingredients at equal proportions. The coarse powder of the three plant parts are boiled in 16 parts of water till it reduces to 4 parts, filtered and stored to be used as medicine. The literature for preparation of this medicine is from Sahastrayogam and Astangahridayam Vatavyadhi chikitsa 21/57.

All the drugs included in Sahacharadi kashayam are having Vata-kapha shamaka, Vedanasthapana Shulahara, shothahara and Nadiuttejaka(Nerve stimulant) properties along with strengthening and nutritive therapy for various musculature and structure in lumber region and extremities which is very much effective in the treatment of Sciatica.

Drug Review^[7]

Properties	Sahachara (<i>Barleria Prionitis</i>)	Devdaru (<i>Cedrus Devadara</i>)	Nagar/Shunthi (<i>Zingiber officinale</i>)
Rasa (Taste)	Tikta, Madhura	Tikta, Katu	Katu
Guna (Character)	Laghu, Snigda	Laghu, Snigda	Guru, Ruksha
Virya (Potency)	Ushna	Ushna	Ushna
Vipaka (Post effect)	Katu	Katu	Madhura
Action & Uses	Kaphavatashamaka, Shothahara, Vedanasthapana, Nadiuttejaka	Kaphavatashamaka, Shothahara, Vedanasthapana ,highly beneficial in various types of pain, arthritis, inflammation	Kaphavatashamaka, Shothahara,Deepaniya Shoolaprashamana Vedanasthapana,Uttam Aampachana

Probable mode of action

Sahacharadi Kashayam is a simple formulation of 3 drugs found in the texts of Ayurveda and is highly effective in management of Sciatica. All the three drugs work in a synergetic manner. Efficiency of polyherbal formulations was described in 'Sharangdhara Samhita', an Ayurvedic literature by Sharangadharacharya, when combining the multiple herbs in a particular ratio, it will give a better therapeutic effect and reduce the toxicity.

Sahacharadi Kashayam addresses vata disorders like joint pain, osteoarthritis, rheumatoid arthritis etc. Anti-inflammatory and anti-arthritic action of this medicine helps to alleviate the various symptoms including improving the blood circulation in the affected areas, body pain and debility.

The GC MS analysis of Sahacharadi kashayam was reported showing the presence of the following molecules such as Heptanediamide, N,N'-di-benzoyloxy-Benzoic acid, Phenol, 2-methoxy-4-(1-propenyl), Eugenol, Tetradecanoic acid, 3-Decanone, 1-(4-hydroxy-3-methoxyphenyl)-(Gingerol), Abietic acid. These molecules are known to have anti-inflammatory properties.^[8]

In yet another report Sahacharadi kashayam was reported to have very good antioxidant properties. Many research articles have proved the efficacy of Ayurvedic drugs for the treatment of Rheumatoid arthritis.^[9]

Barleria prionitis is reported to be an excellent antioxidant and anti-inflammatory plant. Several reports demonstrated the usage of *B. prionitis* in the treatment of inflammations. The anti-inflammatory activity of *B. prionitis* was evaluated through in vitro enzyme based cyclooxygenase (COX-1 and COX-2) assays. It was found that the dichloromethane, petroleum ether and ethanol extracts of leaves, stems and roots exhibited significant inhibition of COX-1 and COX-2 with subsequent inhibition of prostaglandin synthesis that are involved in pain sensation (Amoo et al., 2009).^[10] The Aqueous Fraction (TAF) of hydromethanolic extract of *B. prionitis* whole plant reported to have significant anti-inflammatory activity against the acute inflammation

induced by carrageenan, histamine and dextran in rats (Singh et al., 2003).

C. deodara shows antiarthritic activity. Incidence of gastric ulcer was maximum with betamethasone and minimum with *C. deodara*.^[11]

Ginger has strong potential for treating a number of ailments including degenerative disorders (arthritis and rheumatism) It also has anti-inflammatory and anti-oxidative properties for controlling the process of aging. It can treat a wide range of diseases via immunonutrition and anti-inflammatory responses. As a result of anti-inflammatory effect of ginger, it can reduce muscle pain after intense physical activity. Gingerol, shogaol, and other structurally-related substances in ginger inhibit prostaglandin and leukotriene biosynthesis through suppression of 5-lipoxygenase or prostaglandin synthetase. Additionally, they can also inhibit synthesis of pro-inflammatory cytokines such as IL-1, TNF- α , and IL-8.^[12]

Thus, it seems quite pertinent that the constituent plants do contribute to the Anti-inflammatory, Analgesic, antiarthritic properties of Sahacharadi kashayam.^[13] But further study is needed to prove clinical effects of this Ayurvedic formulation and to reduce the reoccurrence of arthritic inflammatory changes. However, the present study authenticates the medical benefits of this Kashayam in the treatment of Painful conditions like Sciatica as reported in literature.

CONCLUSION

According to Ayurveda, Gridhrasi is described as a Vatavyadhi and it is also believed that any type of pain can't be without presence of Vata. Gridhrasi is a severely painful condition so, Vata Pradhanata in its pathogenesis is clear. Gridhrasi by nature is Kashtasadhya. Still however if the patient comes earlier for the treatment and if given prompt proper treatment in sufficient dose and duration, then the patient is likely to be cured or less likely to suffer from a subsequent attack of pain.

All the drugs included in Sahacharadi kashayam are having Vata-kapha shamaka, Vedanasthapana Shulohara, shothahara and Nadiuttejaka (Nerve stimulant) properties

along with strengthening and nutritive therapy for various musculature and structure in lumber region and extremities which is very much effective in the treatment of Sciatica.

The Ayurvedic medicines are cheap, more effective, with less or no side effects, easily available and affordable. Thus there is an obvious need to ascertain the scientific basis of the roles of these medicines.

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