



Review Article

SCIENTIFIC UNDERSTANDING OF *KATI BASTI* AND ITS APPLICATION IN SCIATICA
(*GRIDHRASI*)

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ABSTRACT

Kati Basti is an Ayurvedic treatment approach that includes several acts such as *Bahyasnehana* (external oleation), and *Swedana Chikitsa* (fomentation therapy). *Katibasti* is not mentioned in any of the classical sources. Even though it is not injected into the body, it is nevertheless referred to as *Basti* because medicated and lubricated substances are applied to certain parts of the body for a set period. In *Kati* (back) and *Adhah shakagata vikaras*, *Katibasti* is beneficial (disorders of the lower part of the body). This type of external *Basti* is very beneficial for muscle spasms, lower back tightness, and bone tissue strengthening in the back area. Backache is the common term used for trending diseases of today's lifestyle due to the engagement of people in improper postures, one of them is sciatica. Sciatica (*Gridhrasi*) is a word for low back pain that travels down the inside of the leg, through the hip, to the back of the thigh, and down the inside of the leg. In general, 5-10% of people with low back pain have sciatica, but the lifetime prevalence of low back pain is believed to be between 49 and 70 percent. Modern science's treatment of sciatica is unsatisfactory, involving the use of analgesics for pain alleviation and surgical techniques that are frequently associated with side effects. *Gridhrasi* or sciatica is treated with a variety of methods described in Ayurveda. *Kati Basti* is a one-of-a-kind therapeutic technique due to its simple, non-invasive, and effective approach. The present review focus of *Kati basti*, its scientific understanding, its mode of action along its application in sciatica.

INTRODUCTION

Ayurveda, an ancient health system supported by scientific therapeutic principles, has number of effective medications and procedures that function in a variety of ways, including prevention, restorative, therapeutic, and complimentary. *Panchakarma* is a key component of Ayurveda having a collection of five procedures along with pre procedures or foremost procedures and post procedures or after the main procedures^[1]. *Kati basti* is a one-of-a-kind method of *Panchakarma* procedures that involves both *Snehana* and *Swedana*, or *Snehayukta swedana*. Because oil is used to treat the patient in this technique, it falls under the category of *Drava sweda* also.

Kati Basti is a method in which a specially designed frame ring made of black gram powder is used to keep a warm therapeutic oil over the lumbosacral area or any neighboring part for a set period of time^[2]. The *Basti* is known as *Katibasti* because it is performed in the *Katipradesha*. *Katibasti* is derived from the term *Basti*, which means to live, hold, or the container that holds the *Kati pradesha* (lumbosacral region). It is a method in which medicinal oils are poured and pooled on the *Kati pradesha* for a predetermined amount of time at a consistent temperature. It aids in the relief of inflammatory changes, the release of spasms, the strengthening of the supporting tissues that support the spine, and the nourishing of the joints through enhancing circulation. Nerves, muscles, arteries, articularies, and other structures in the lumbosacral area are all implicated. *Katibasti* pacifies the enhanced *Rooksha*, *Laghu*, and *Sheeta guna* of vitiated *Vata* as *Taila* (oil) gives sustenance and corrects the *Shelshmaka kapha kshaya* via its *Snigdha*, *Guru* and *Ushna guna*.^[3]

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Lower back pain is a growing problem among adolescents, with the frequency peaking in the third decade of life around the world^[4,5]. Obesity, smoking, family history, stress, and exercise have all been identified as risk factors in the literature. With a frequency of 65 to 90 percent and an annual incidence of 4-5 percent, low back pain is the most prevalent complaint. Improper sitting postures, traveling, changing modes of transportation, two-wheeler users, and sporting activities, among other things, put pressure on the spine, which contributes to the development of low backache or sciatica^[6,7,8]. The lower lumbar spine, lumbosacral region, and sacroiliac joints are all affected. Low back pain affects 60 percent to 80 percent of adults at some point during their lives^[9]. Sciatica is a word for low back pain that travels down the inside of the leg, through the hip, to the back of the thigh, and down the inside of the leg. The prevalence of sciatic symptoms has been documented in the literature to range from 1.6 percent in the general population to 43 percent in a specific working population^[10].

Modern science's treatment of sciatica is unsatisfactory, involving the use of analgesics for pain alleviation and surgical techniques that are frequently associated with a slew of side effects. *Gridhrasi* or sciatica can be treated in a variety of ways according to Ayurveda. *Kati Basti* is a one-of-a-kind therapeutic technique. For the management of the condition *Gridhrasi* (Sciatica), *Kati Basti* is a successful external therapy. So the present review provides us the opportunity to learn everything about *Katibasti* manner of functioning.

Derivation of Word *Kati basti*

Katibasti is a combination of two words- *Kati* and *Basti*.

- *Kati*: It is female gender, and it is described as "*Sariram vatasthaneshvekam*" in the *Charaka Samhita*^[11], implying that it is the *Sthana* of *Vata*. In the *Susruta Samhita*^[12], the *Pramana* of *kati* is described as having 18 *angulis*.
- *Basti*: The term "*Basti*" comes from the root "*Vas*," which is suffixed by "*Tich*" *pratyaya* to form the word "*Basti*," which implies masculine gender. The root "*vas*" has the following meanings, according to *Vacaspatyam*:

- "*Vas -nivase*" – means to remain, to stay.
- "*Vas- acchadane*" – means to cover or wrap.

Kati Basti is referred to as "*Vas Aachhadane*" in this case. "To cover," "that which surrounds," or "*Aavaranam*" is the meaning of the word. As a result, "*Dharana*," or the retention of a substance in the *Kati pradesha* for a set period, maybe deemed *Basti*. "To reside" is the meaning of the word "*Vas Nivase*." This is especially true for *Niruha*, *Anuvasana*, and *Uttara Basti*.

However, in the instance of *Kati Basti*, where oil is kept for some time, it may be regarded as the definition.

Role of *Kati Basti* in Sciatica

Gridhrasi or sciatica, a disease characterized by pain and incapacity, necessitates an energetic approach. The course of treatment is influenced by the *Dosha* and *Dhatu* involved in pathophysiology, which is influenced by the *Nidana*. *Dhatu kshaya* and *Vata prakopa* are unavoidable variables, and the participation of *Asthi*, *sandhi* and *Upadhatus* is clear in every *Gridhrasi* etiology. This impact is immediate in *Abhigata*, but it may take longer in *Aharaja Nidana*. *Basti chikitsa*, *Agnikarma*, and *Siravyadha* are all part of the management line^[13]. Because *Vata* involvement manifests as pain and incapacity with or without *Kapha*, *Snehana* and *Swedana chikitsa* are also recommended as treatments and play a crucial part in *Vata shaman*^[14]. So, the use of *Katibasti* treatment in the management of sciatica is justified.

The muscles stiffen and the capacity to extend and contract is harmed in *Gridhrasi* pathology (*Samprapti*). Nerves get squeezed, and conduction is disrupted. Because the *Vata* is blocked (due to *Srotorodha*), it attempts to push its way through, causing discomfort. A disc may bulge or slide as a result of this. Nerves rub against the margins of the intervertebral disc, causing discomfort^[15].

Kati Basti is an external therapy for the spine that helps to reduce the symptoms of *Gridhrasi* by counteracting the *Khara* (roughness), *Ruksha* (dryness) *Gunas* of *Vata*, rigidity, and tightness by improving the conduction of nerves to travel uninterruptedly.

Kati basti is a form of *Snehayukta sweda*, *Sagni*, *Ekanga*, *Snigdha*, *Madhyama*, *Drawa*, and *Samshamaniya bahiparimarjana chikitsa*. It is the combination of *Snehana* and *Swedana* both work together in synchronous and help to relieve *Stambha*, *Gaurava*, and *Seeta*, as well as to lessen the severity of pain. *Kati basti* is one such method in which rapid relief from symptomatology can be acquired from a *Shamana* perspective, as well as numerous medications that ease the severity of pain and improve functional ability, both of which are important in *Gridhrasi*. It is a *Bahirparimarjan chikitsa* that relieves *Sthanikvata* and provides *Brumhana* qualities in the *Kati* area, which is where the disease occurs (lumbosacral region).

Mode of Action

The mode of action is determined by the region chosen for the therapy, the base oil utilized, the medicament employed, the duration of oil contact with the area of application, the volume of oil placed, the duration of the treatment, and the temperature of the oil applied. The illnesses for which *Katibasti* is prescribed are usually found in *Katipradesha*, whether

superficial or profound. The treatment's effect should extend to the site of pathogenesis.

Whatever oil is used in *Katibasti*, the foundation oil is sesame oil. Sesame oil is easily absorbed and penetrates deep into the body. Neuronal stimulation can be caused by penetrated medications. When administered to the diseased area, *Katibasti* also relieves pain. This action could be accomplished through neural stimulation.

A longer *Katibasti* (approximately 30 to 45 minutes) results in more hot fomentation and acetyl chloride release. Warming has a calming effect via sensory neurons endings and induces vasodilation^[16], which reduces muscle spasm and pain associated with tonic muscle contraction. Vasodilation is caused by hot fomentation^[17] which promotes the flow of blood and nourishment to the organ and finally helps the tropical drug to reach the target tissue or organ. Sweating flushes toxins from the body and relaxes the tissues^[18] resulting in an overall improvement in muscle spasms and pain. Increased peripheral circulation aids in the reduction of edema, which can aid in the reduction of inflammation, reduces pain, and aids in faster healing.

The thermal impact of heated oil is caused by an increase in blood temperature, activation of the thermosensor in the skin, and an increase in local temperature. Heat may be described as a rise in particle velocity. This has a catalytic influence on all chemical processes in general. As a result of the application of heat, the cell's local metabolism and transport via the cell membranes both increase.

The metabolic activity rises by roughly 10% for every one degree Celsius increase within physiological limitations. The oxygen partial pressure (po₂), carbon dioxide partial pressure (pco₂), and acidity pH all rise as a result of the local metabolic activity. The influence of these three factors on the precapillary Sphincter and meta arterioles determines the local perfusion. The tissue's pre-capillary sphincter and meta-arterioles^[19] alternating contractions and relaxations to maintain local homeostasis. The perfusion of the capillary bed is controlled by this alternative action. The blood in the capillaries is forced forward at the same time by the contraction. The process of auto-regulation is known as "vasomotion^[20]," and it is primarily influenced by oxygen concentration. The elasticity of connective tissue, particularly collagenous tissue such as skin, muscle, tendon, ligament, or articular capsule, will increase when the temperature of connective tissue rises. The elasticity of fibrous tissue can be improved by a factor of 2 to 10. At the same time, the matrix's viscosity falls. As a result, connective tissue including tendon tissue and ligaments will become more flexible and relieves the strain and spasm as well as reduce inflammation and pain.

CONCLUSION

Katibasti is a type of *Snigdha sweda* that can exert both cold and hot fomentation effects. The absorption, penetration, neural stimulation, vasodilation, and anti-inflammatory activity of *Katibasti* result in a reduction of signs and symptoms of sciatica or *Gridhrasi*.

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