

A REVIEW ARTICLE ON SHAT KRIYAKALA IN RELATION TO SAMPRAPTI OF GRIDHRASI (SCIATICA)

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ABSTRACT

Modernization and sedentary lifestyle are leading to various disorders of the locomotor system. One of the most common disorders affecting movement, particularly in the productive period of life is low back pain, which comes under the umbrella of Sciatica Syndrome. Based on symptoms Sciatica can be correlated with *Gridhrasi*, which is characterized by *Ruk*, *Stambha*, *Toda* starting from *Sphik*, *Kati*, and *Prishtha* radiating down to *Uru*, *Janu*, *Jangha*, *Pada* and impairment of lifting of the thigh. For effective management purposes, one needs to know the pathogenesis (*Samprapti*) of the disease and *Shat Kriyakala* as a tool for it. The knowledge of *Shat Kriyakala* helps get the knowledge of *Sadhya Asadhyatava* of disease and plans the proper treatment. Pathogenesis of *Gridhrasi* is not separately mentioned in classics. In this article, the effort has been made to explore the *Samprapti* of *Gridhrasi* by *Shat Kriyakala*.

Keywords: *Gridhrasi*, *Shat Kriyakala*, *Samprapti*, Sciatica.

INTRODUCTION

The modernization and sedentary lifestyle of human beings in developing countries have created several disharmonies in the biological system leading to various disorders, which primarily hamper the locomotor system. ^[1] One of the most common disorders which affect movement, particularly in the productive period of life is low back pain, out of which 40% of patients suffer from severe pain which comes under the umbrella of Sciatica Syndrome. ^[2] Sciatica is a disease having symptoms such as pain, numbness, tingling, and weakness starting from the low back and or buttocks and radiating towards the foot through the back of the thigh, knee joint, and leg when one or more of the nerve roots forming the Sciatic Nerve are either compressed or irritated. ^[3] Based on symptoms Sciatica can be correlated with *Gridhrasi*, which is characterized by *Ruk* (Pain), *Stambha* (Stiffness), *Toda* (Pin Prickling Sensation) starting from *Spik*, *Kati*, *Prishtha* radiating down to *Uru*, *Janu*, *Jangha*, *Pada* and impairment of lifting of the thigh. ^[4] The pattern of movement is just like limping gait of a Vulture (*Ghradhra*) due to extreme pain. *Gridhrasi* is a *Maharoga* classified under *Vataja Nanatmaja Vyadhi*.^[5] As per *Sushruta Samhita*, in its pathogenesis vitiated *Vata Doshas* affects the *Kandara* of *Parshnee* (Heel) and *Angulee* (Toes) causing *Sakthi kshepanigraha* (restricted lifting of the lower extremity).^[6] Sciatica is a pain dominant disease and reduces one's activity considerably affecting both personal & professional life. Low backache affects 80 – 90 % of people during their lifetime 5% of cases become the victim of Sciatica.^[7] Prevalence of Sciatica varies considerably ranging from 3.8% in the working population to 7.9 % in the non-working population. ^[8] In *Ayurveda* prevention of the disease and maintaining health has been given priority even before the treatment of any disease. In our classics, several tools have been described that help the physician to diagnose, treat and prevent diseases. Treating any disorder becomes easy when causative factors and pathology of the disease, are well known. *Acharya Sushruta* mentioned *Shat Kriyakala* in *Vranprashaniyaadhyaya* to understand the concept of the

pathology of any disease. ^[9] *Shat Kriyakala* is a diagnostic tool to know the stage of disease formation where *Kriya* means the chance of treatment used to improve the disturbance in *Dosha*, and *Kala* refers to the stage of progress of a disease. ^[10] All six stages of *Kriyakala* successively develop one after the other and become the stage of development of disease which is known as *Roga Samprapti*. During these stages, the *Dosha* got vitiated, and in turn causes vitiation of *Dosha*, *Dhatu*, *Mala*, and *Oja*. ^[11] It helps to understand disease prognosis, diagnosis, and what treatment is applied at different levels. All disease pathogenesis and preventive measure are known by *Shat Kriyakala*. It is the process of understanding the pathogenesis of disease in a consecutive manner or stages which gives chance to prevent the disease. Staging of *Gridhrasi* like accumulation, aggravation, spreading, localization, manifestation, and classification is also known by *Shat Kriyakala*. ^[12] These six are also the stages of *Chikitsa*. If *Vyadhi* is treated in the first stage, it won't convert into the next stage. If accumulated *Doshas* have been eliminated they won't manifest successive stages of *Kriyakala*. If not eliminated, it passes to the next stages. As the disease advances to a later stage, it becomes stronger and more difficult to manage. ^[13]

Here we have tried to highlight the importance of *Shatkriyakala* in clinical practice to treat *Gridhrasi*. In this article, we try to understand the etiopathogenesis of *Gridhrasi* by *Shat Kriyakala*. *Shata Kriyakala* helps in understanding the pathogenesis of *Gridhrasi* in consecutive stages.

AIM AND OBJECTIVES:

1. To study the role of *Shat Kriyakala* in *Gridhrasi*
2. To understand the *Samprapti* of *Gridhrasi*.

MATERIAL AND METHODS:

Material has been collected from ancient *Ayurvedic* texts, research journals, and electronic databases.

SANCHAYA Word *Sanchaya* means collection or putting together. *Sanchaya Awastha* is an incentive stage of *Kriyakala* where accumulations of *Doshas* due to various *Nidana Sewan* takes place. In this stage, *Doshas* get accumulated, but they do not leave

their place. Etiopathogenesis of any disease which is called *Samprapti* in *Ayurveda* gets started in this stage. ^[14]

There are no specific *Nidanas* (Hetu) of *Gridhrasi*, mentioned in *Ayurvedic* literature. As *Gridhrasi* is *Vata Nanatmaja Vyadhi*, general *Hetus* of *Vata Vyadhi* viz. *Aharaja*, *Viharaja*, and *Abhighataja* are explained by *Acharya Charak* ^[15] and *Sushruta* ^[16], out of these some are responsible for the manifestation of *Gridhrasi* which are as follows: *Aharaja: Ruksha, Sheeta, Alpa, Laghu Anna, Adhyahsan, Alpashana, Kathin Bhojana, Ritu Viparitahara, Mithyahara, Dhatu-kshyakara, Satmya Viparita, Katu dravya Atisevana. Viharaja: Vishamachesta, Ati vyavaya, Ati vyayama, Vega sandharana, Vishmashana, Dukhashayya, Diwaswapna, Ratri Jagarana, Pradhavana, Aticheshta.*

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

Only quantity of *Dosha* is increasing in this stage and produce mild symptom, which is like and dislike for certain foods, activities, etc; desire for those which possess qualities, opposite to those of the increased *Dosha* (*Viprita Gunaichchha*) and dislike for those which caused the increase of the *Dosha* (*Chaya-Karana Vidwesa*). ^[17] It is also known as *Samhata Rupa Vriddhi* (without mobility). ^[18] Due to insufficient *Nidan* (causative factor) *Dosha* increase but remain in an immobile state in their place. ^[19]

PRAKOPA – If no treatment or action is taken in *Sanchaya Awastha*, then *Dosha* further accumulates owing to constant *Nidan Sevan* and comes into the next stage which is *Prakopa Awastha*. In this stage, the previously accumulated *Dosha* get more aggravated but at that time they remain within their sites. According to *Acharya Vagbhata*, *Prakopa* is *Unmargagamita* which means *Dosha* starts upward movement in their place. ^[20] In this stage *Dosha* is in form of *Villayana Rupa* means it is in liquid form. ^[21] In this stage of *Prakopa Awastha* if *Vata Vardhak Nidan* is taken constantly then *Vata Dosha* gets more aggravated in maximum quantity at its sites and is ready to expel. *Prakupit Vata Dosha* causes *Koshtha-*

toda (sensation of pinning pain) and *Koshtha Sancharana* (movement of *Vayu* in the abdomen). ^[22]

PRAASAR–

Aggravated *Dosha* leaves its original place and spread to other parts of the body through different *Srotas*. At this stage all vitiated *Dosha* aggravate more and more and leave their chief place then enter into *Rasraktadi Paribharaman* and spread via three types of *Gati* in the body through *Tiryaka Shira*. ^[23]

As *Gridhrasi* is *Vata Pradhan Vyyadhi*, in *Prakopavastha* if preventive measures are not undertaken and *Vata Vardhak Nidan* is taken in excess *Vata Dosha* gets aggravated and spread to different places and produces *Vata Prasara Lakshana* i.e., *Vimarga - Gamana* (regurgitation), *Atopa* (flatulence and gurgling) accompanied by rubbing noise of enlargement of a particular part in the manifestation of *Gridhrasi*. ^[24]

STHANASAMSHRAYA– In *Prasara Awastha, Prakupit* (vitiated) *Dosha* who spreads outside from their native place, gets obstructed at that part of the body where *Khavaigunyua* exists and gets localized there in this stage. This process of localization of *Dosha* is known as *Sthanasamshraya*. It is a phase where the disease is yet to be manifested. *Dosha* gets obstructed in the *Srotas* due to *Khavaigunyua* leading to *Doshas-Dushya-Sammurchana*. ^[25] As a result of these *Poorvaroopa* (Prodromal Symptoms), the disease appears. Here the symptoms are weak, and this stage is also called *Poorvaroopaawastha*. ^[26] *Khavaigunyua* occurs in *Kati and Sakthi Pradesh* and mainly *Vata Dosha* gets accumulated in *Kati* and lower extremities by *Srotosanga*. It is the stage where disease formation starts. There is no specific description of *Poorvaroopa* of *Gridhrasi* in the classical texts, but as it comes under *Vata Vyadhi*, the *Poorvaroopa* of *Vata Vyadhi* may be considered as its *Poorvaroopa*. *Avyakta Lakshanas* are *Poorvaroopa* of *Vata Vyadhi*. *Chakrapani* says that *Avyakta* means mild symptoms are to be taken as a *Poorvaroopa*. *Gridhrasi* is a *Vata Vyadhi* and *Vata* being *Ashukari, Sukshma*, and *Chala*, the *Poorvaroopa* of *Vata Vyadhi* are unstable. The *Poorvaroopa* also depends upon *Prakruti, Dushya, Desha, Vaya, Kala, Bala, Satva,*

Satmya, etc. [27] If one has complete knowledge of all these prodromal symptoms and is treated early as possible, then the disease will cure easily.

VYAKTAWASTHA– *Vyaktawastha* is the fourth stage of *Shat Kriyakala*. According to *Dalhana* this stage is a stage of manifestation of disease. In this stage, Cardinal signs and symptoms are well-produced, and one can easily identify the disease. [28] Before this stage, we say that *Dosha* is in *Tridoshaja* condition but in *Vyaktawastha* they specifically show their presence. [29]

Gridhrasi, the name itself indicates the way of gait shown by the patient due to extreme pain is like, *Gridhra* or Vulture. The sign and symptoms of *Gridhrasi* are *Ruk* (pain), *Toda* (pricking sensation), *Muhuspanan* (Tingling sensation), *Stambha* (stiffness) in the *Sphik*, *Kati*, *Uru*, *Janu*, *Jangha*, and *Pada* in order [30] and according to *Sushruta Sakthikshepanigraha* (restricted movements of lower extremities) is a cardinal symptom of *Gridhrasi*. [31] In *Vata Kaphaj Gridhrasi*, *Tandra* (Drowsiness), *Gaurav* (Heaviness), and *Aruchi* (Anorexia) may also be present. [32]

BHEDAWASTHA – If appropriate action was taken in *Vyaktawastha* then *Dosha* vitiation will be suppressed, and the disease does not progress to the next stage which is *Bhedawastha* and *Updravaawastha*. Untreated disease attains chronicity and develops *Updrava* (complications). In this stage, diseases became *Chirakari* (chronic) or *Asadhya* (incurable). [33] Chronicity depends upon several factors like the intensity of *Nidana*, *Purvarupa*, or *Rupa*, the extent of vitiation of *Dosha*, *Dhatu* involvement, *Prakriti* of patients, etc. [34]

SAMPRAPTI OF GRIDHRASI ON THE BASIS OF SHAT KRIYAKALA: The method by which we can understand the development of disease by the continuously circulating vitiated *Dosha* inside the body known as *Samprapti* [35] is nothing but the proper understanding of the disease-producing process. *Acharya Madhavakar* said that *Samprapti* means knowing the factors which are responsible for the manifestation of disease apart from gaining the knowledge of the disease. [36]

In *Sanchaya* stage, taking various causative factors like *Aharaja*, *Viharaja*, and *Abhighataja Nidan* leads to the accumulation of *Vata* and *Kapha Dosha* in *Pakwashya* and *Amasaya* respectively which are the specific site of *Vata* and *Kapha Dosha*. Accumulated *Vata Dosha* causes symptoms such as *Stabdhta* and *Purna Koshthata* whereas *Kapha Dosha* causes *Gaurav* and *Alasya*.

When no treatment is done in *Sanchaya Awastha*, *Vata-Kapha Vardhak Nidan* are continuously being taken then *Vata* and *Kapha Dosha* further accumulate and come into the next stage which is *Prakopa Awastha*. In this stage, the previously accumulate *Dosha* gets more aggravated in maximum quantity at its sites. *Prakupit Vata Dosha* cause *Koshthatoda* (sensation of pinning pain) and *Koshtha Sancharana* (movement of Vayu abdomen) and *Kapha Dosha* causes *Aruchi*, *Annadwesh*, and *Hrillas*

Vata and *Kapha Dosha* get further aggravated and spread to different places and reach the *Kati* and *Sakthi* which are *Madhyam Rog Marga*. *Vata Dosha* produces *Vata Prasara Lakshana* i.e., *Vimarga - Gamana* (regurgitation), *Atopa* (flatulence and gurgling) while *Kapha* causes *Arochak*, *Angasaad*, *Avipaak*, and *Chhardi*, form *Prasar Awastha*. Due to *Sewan* of *Vishishta Ansh* of *Nidan*, *Khavaguinayya* occurs in *Kati* and *Sakthi* where *Vataadi Dosha* combines with *Dushya* such as *Ras*, *Rakta*, *Mamsa*, and *Nadi* called as *Dosha-Dushya-Sammurchana* and shows *Poorvaroop* of *Gridhrasi* which form *Sthansmsharaya Aawastha*. Then in *Vyaktawastha Dosha Dhusya Samuchrna* has been complete, among all the *Dosha*, *Vata*, and *Kapha* get aggravated predominantly and cause the *Shithilata* of *Dushyas*, leading to the *Sangatmaka Vikriti* (vitiation) in *Srotas* (*Rasvah*, *Raktavah*, *Mamsavah*, *Asthivah*). Vitiated *Vata Dosha* manifests the symptoms of *Gridhrasi* which are *Ruk* (pain), *Toda* (pricking sensation), *Muhuspanan* (Tingling sensation), *Stambha* (stiffness) in the *Sphik*, *Kati*, *Uru*, *Janu*, *Jangha*, and *Pada* in *Vataj* type whereas, in *Vata Kaphaj Gridhrasi*, *Tandra* (Drowsiness), *Gaurav* (Heaviness) and *Aruchi* (Anorexia) may also be present. If no measure has been taken yet, then the disease progress to the next

stage which is *Bhedawastha*, and it becomes *Asadhya Awastha*, and untreated disease attains chronicity and develops *Upadrava* (complications).

SPECIFIC SAMPRAPTI OF GRIDHRASI BASED ON VATA VYADHI: [37]

As *Gridhrasi* is not separately mentioned in *Samhitas*, it comes under the heading of *Vata Vyadhi* and there is no detailed description of *Samprapti* of *Gridhrasi* in the classics. Therefore, *Samprapti* of *Gridhrasi* is described based on *Samprapti* of *Vata Rog*.

A. *Samprapti* of *Vataja Gridhrasi*:

According to *Acharya Charaka*, *Vataja Gridhrasi* is separately produced by *Vata Prakopa* or *Vata Vrid-dhi*. *Vata Prakopa Ahara Vihara* causes Vitiating of *Vata Dosha*. Vitiating *Vata Dosha* gets accumulated at the *Kati*, *Sakthi*, and in *Kandara*, which in turn produces the symptoms viz. *Stambha*, *Ruka*, *Toda*, *Spandana* in *Kati*, *Prushtha*, *Uru*, *Janu*, *Jangha*, and *Pada* in respective order which manifest as *Vataj* type of *Gridhrasi*.

B. *Samprapti* of *Vata-kaphaja Gridhrasi*:

When *Kapha Prakopaka Nidana* is taken along with *Vata Prakopaka Nidana*, it gives rise to *Agnimandya*, which leads to formation of *Ama*. This in turn cause *Avaran* (obstruction) in the path of *Vata Dosha* which further vitiates *Vata Dosha*. Here *Kaphaavritta Vata* also leads to *Agnimandya* and ultimately helps in the accumulation of *Kapha*. On the other hand, *Kha-Vaigunya* occurs due to *Nidana Sevana* in *Kati*, *Prushtha*, *Sakthi*, and *Kandara*. Thus, both vitiating *Vata* and *Kapha* get localized at the place of *Kha-vaigunya* and produce symptoms of *Vata-Kaphaja Gridhrasi*.

Keeping in mind the above description, the *Samprapti Ghatakas* of *Gridhrasi* may be constituted as follows: [38]

- *Dosha*: *Vata* and *Kapha*
- *Dushya*: *Rakta*, *Mamsa*, *Asthi*, *Nadi Sansthan*
- *Srotas*: *Raktavaha*, *Mamsavaha*, *Asthivaha*, and *Nadi Sansthan*
- *Srotodushti*: *Sanga*
- *Rogamarga*: *Madhyama*
- *Agnimandya*: *Jatharagnimandya*, and *Dhatvagnimandya*

- *Udbhavasthana*: *Pakvashaya*
- *Adhishtana*: *Kati* and *Prushthavamsha*
- *Vyaktasthana*: *Sphik*, *Kati*, *Prushtha*, *Uru*, *Janu*, *Jangha*, and *Pada*

DISCUSSION

Gridhrasi, which is characterized by *Ruk* (Pain), *Stambha* (Stiffness), and *Toda* (Pin Prickling Sensation), starts from *Spik*, *Kati*, *Prushtha* radiating down to *Uru*, *Janu*, *Jangha*, *Pada*, and impairment of lifting of the thigh. Here an attempt has been made to highlight the importance of *Shat Kriyakala* in clinical practice to treat *Gridhrasi*. We try to understand the etiopathogenesis of *Gridhrasi* by *Shat Kriyakala*. *Shata Kriyakala* helps in understanding the pathogenesis of *Gridhrasi* in consecutive stages. *Shat Kriyakala* is the concept of *Ayurveda* which is nothing but the journey of formation of disease. To the disease in its early stage, its prior diagnosis is necessary and knowledge of *Shat Kriyakala* provides that chance. With the help of *Shat Kriyakala*, we can treat the disease *Gridhrasi* earlier and break the pathogenesis of *Gridhrasi* before becoming *Asadhya*. *Sanchaya Prakopa* and *Prasarawastha* are dependent upon *Nidana Sevan*. In *Vyaktaawastha*, the disease shows clear signs and symptoms that help us to identify the disease and can be compared with the clinical stage of the disease. The physician can make a clear diagnosis in this stage and treats it by using appropriate medicine. If the disease is not treated in *Vyaktaawastha* it becomes more complicated and goes under the final stage of *Bhedawastha*. In *Bhedawastha* due to chronicity complications appear. All these six stages of *Kriyakala* provide a chance to break pathogenesis and cure the disease *Gridhrasi*.

CONCLUSION

Shat Kriyakala is not only a diagnostic tool, but it is a treatment protocol too which we use at different times in different disorders. It is helpful for all diseases; *Gridhrasi* is an example of them. *Shat Kriyakala* helps in the diagnosis, prognosis, and prevention of all diseases. So, it is very essential to have the proper knowledge of *Shat Kriyakala* in understanding

the process of manifestation of disease and plan the treatment. Also, the knowledge of *Samprapti* helps in the comprehension of the specific features of a disease like *Dosha*, *Dushya*, *Srotodushti*, *Ama* & *Agni*, etc. The knowledge of *Shat Kriyakala* helps us to explore the *Sadhyasadhyatva* of disease and also plays an important role in the treatment. It is an attempt to try to make a *Samprapti* or pathogenesis of *Gridhrasi* according to different stages of *Gridhrasi* in respect to *Shat Kriyakala*. The physician, who diagnoses the disease and treats it according to *Shat Kriyakala*, will become a successful practitioner. By knowing the *Shat Kriyakala* the disease progression can be arrested at the initial stage & the complications can be avoided. The treatment of the disease should be started at the proper time. It should not be overlooked under any circumstances whatsoever. It also reduces drug doses & period required for treatment. Thus, the cost-effective medical help can be provided to the patients & the wastage of time for therapy can be reduced.

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