

Case Study

ACUTE PAIN MANAGEMENT IN VATAKAPHAJA GRIDHRASI

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ABSTRACT

Gridhrasi is one of the *Vataja Nanatmaja Vyadhi* in which the vitiated *Vata* afflicts the *Kandara* and *Sira* of lower limb leading to *Stambha*, *Ruk*, *Toda* along with *Spandana* starting from *Kati Pradesha* to *Prustha*, *Janu*, *Jangha* and *Pada* of either one side or both side of the lower limbs. Due to similarities in the clinical presentation, it can be studied under the spectrum of Intervertebral Disc Prolapse of lumbar spine. It is a condition affecting the spine in which the annulus fibrosus is damaged enabling nucleus pulposus to herniate, due to which there will be compression of Spinal Cord or the exiting nerve roots causing severe pain in the low back radiating to lower limbs. The incidence of Herniated disc is about 5 to 20 cases per 1000 adults annually and is most common in male patients when compared with female. In this case a male patient of age 36 suffering with acute pain in the low back region was effectively managed by *Nadi Sweda* followed by dry cupping for 7 days, followed by *Patra Pinda Sweda* for 7 days. The study shows significant relief in the pain and remarkable improvement in the range of movement of lumbar spine.

INTRODUCTION

Low backache is a very common problem and has a iniquitous distribution. Among the galaxy of causative factors, both spinal and extra spinal, the most common cause of low backache seems to be the lumbar disc disease. Bad posture plays a very significant role in the genesis of the disease. Backache which was known as an ancient curse is now known as a modern international epidemic.

80% of the population is affected by this symptom at some times in life. The incidence of herniated disc is about 5 to 20 cases per 1000 adults annually and is most common in people in their third to the fifth decade of life, with a male to female ratio of 2:1.^[1] In 95% of the lumbar disc herniation the L4-L5 and L5-S1 discs are affected. Impairment of back and spine are ranked as the most frequent cause of limitation of activity in people younger than 45 years.^[2] *Gridhrasi* is explained as one among the 80 *Vataja Nanatmaja Vikaras*.^[3]

The word *Gridhrasi* is originated from the root *Gridhra* which means Vulture. Due to pain, the gait of the patient will be similar to that of Vulture. It is of 2 types *Vataja Gridhrasi* and *Vatakaphaja Gridhrasi*.

Nidana of Gridhrasi^[4]

There is no specific *Nidana* mentioned in the classics for *Gridhrasi*. Since *Gridhrasi* is one among the *Vataja nanatmaja vikara*, the provocative factors of *Vata*, general *Vatavyadhi nidana* can be considered as *Nidana of Gridhrasi*.

Aharaja Nidana

Ruksha, *Sheeta*, *Laghu Anna*, *Katu*, *Tikta*, *Kashaya Rasa*, *Abhojana*, *Langhana*, *Abhojana*.

Viharaja Nidana

Ativyayama, *Ativyavaya*, *Atiprajagara*, *Vishama Upachara*, *Plavana*, *Atiadhava*, *Diwaswapna*, *Vegadharana* etc.

Manasika Nidana

Chinta, *Shoka*, *Bhaya* and *Krodha*.

AnyaNidana

Ati asruk sravana, *Dhatukshya*, *Varsha rutu*, *Marmabhogata*, *Margavarana*, *Rogatikarshana* etc.

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Purvarupa

There is no direct reference regarding the *Purvarupa* of *Gridhrasi*. *Acharya Charaka* has mentioned *Avyakta lakshana* as *Vatavyadhi Samanya Purvarupa*, *Chakrapani* commenting on the word *Avyakta* mentions mild symptoms are to be taken as *Purvarupa*. So mild symptoms of *Gridhrasi* can be considered as *Purvarupa*.^[5]

Bedha

There are 2 types of *Gridhrasi* mentioned in the classics.^[6]

1. *Vataja gridhrasi*
2. *Vatakaphaja gridhrasi*

Lakshana

Patient experiences symptoms like *Ruk, Toda, Stambha* and *Muhuspandana* in *Sphik, Kati Pristha, Uru, Janu, Jangha* and *Pada* are the distinctive features of *Vataja Gridhrasi*.^[7] In addition to this *Tandra, Gowrava* and *Arochaka* are the features of *Kaphaja Gridhrasi*.^[8]

With change in lifestyle, low back pain has become very common clinical problem, which hampers the day to day activities of individual. One of the main causes of low back is disk herniation which is more common in the lumbar vertebrae. Degenerative changes make disc susceptible to trauma, any trauma which suddenly increases the pressure will result in rupture of the posterior fibers of the annulus, e.g. weight lifting, fall on the buttocks, direct trauma to back, twisting movements and occupation involving flexion and lifting motions.^[9]

Common clinical findings include low back pain along with radiculopathy. Pain usually begins in the lower back radiating to the sacroiliac region, buttocks and thigh extending below the knee.^[10]

Conventional treatment includes absolute bed rest, non-steroidal anti-inflammatory drugs, muscle relaxants along with exercise and physiotherapy.^[11]

Personal History

Name - XYZ	Sleep - Sound
Age - 36 years	Bowel habit - Regular
Sex - Male	Appetite - Good
Marital status - Married	Weight - 65kg
Occupation - Accountant	Height - 168cm
<i>Bala - Madhyamika</i>	Addiction - none

Astasthan Pareeksha

<i>Nadi - Vataja nadi, 78/min</i>	<i>Shabdha- Prakruta</i>
<i>Mala - Prakruta 1time/day</i>	<i>Sparsha-Anushna Sheeta</i>
<i>Mutra- Prakruta 4-5 times/day</i>	<i>Drik - Prakruta</i>
<i>Jihva - Alipta</i>	<i>Akriti - Prakruta</i>

In Ayurveda, *Acharya Charaka* mentions the *Chiktsa* of *Gridhrasi* as *Siravyadha, Basti karma* and *Agnikarma*.^[12] As it is one among 80 *Vataja Nanatmaja Vikara Samanya Vatavyadhi Chiktsa* like *Snehana Swedana Vamana Virechana* and *Basti Karma* can be adopted depending on the patients condition.^[13]

Here is a case study of a male patient suffering from *Vatakaphaja Gridhrasi* with acute pain in the low back radiating to left lower limb along with stiffness in the low back, effectively managed with dry cupping and *Swedana* therapy.

Case Report**Chief Complaint**

C/O acute pain in the low back region radiating to left lower limb along with stiffness in the low back since 1 day.

Associated Complaint

Associated with numbness in the left lower limb.

Past History

N/K/C/O diabetes mellitus and hypertension

H/O mild low back ache since 2 years

History of Present Illness

A 36 year old male patient who is N/K/C/O hypertension, diabetes mellitus and other systemic illness, with the history of low back pain since 2 years which was mild in nature. One day he tried to lift heavy weight of around 15kg and suddenly developed acute pain with stiffness in low back region which was radiating to left lower limb associated with numbness. He was unable to walk for 100 meters, stand upright for 5 min and lie in the prone position. He consulted Orthopedic physician and was suggested for MRI of lumbar spine and was diagnosed with IVDP of lumbar spine and was suggested to go for surgery. So for further management he approached Panchakarma department of SJGAUH, Bengaluru on 10/04/2023.

Dashavidha Pariksha

<i>Prakriti - Vata Kapha</i>	<i>Samhanana - Madhyama</i>
<i>Hetu - Lifting heavy weight</i>	<i>Pramana - Madhyama</i>
<i>Dosha - Vata Kaphaja</i>	<i>Satmya - Madhyama</i>
<i>Dushya - Kandara, Sira</i>	<ul style="list-style-type: none"> • <i>Ahara Shakthi</i> • <i>Abhyavarana Shakthi - Madhyama</i> • <i>Jarana Shakthi - Madhyama</i>
<i>Desha - Anupa</i>	<i>Vyayama shakthi - Avara</i>
<i>Sattva - Madhyama</i>	<i>Vaya - Madhyama/36 years</i>
<i>Sara - Medosara</i>	<i>Bala-Madhyama</i>

Nidana Panchaka

<i>Nidana</i>	Improper sitting posture, lifting heavy weight
<i>Poorva Rupa</i>	Mild low back ache
<i>Rupa</i>	Acute pain with stiffness in low back region, radiating to left lower limb Numbness
<i>Upashya & Anupashya</i>	Nothing specific

Samprati Ghataka

<i>Dosha</i>	<i>Vata, Kapha</i>
<i>Dushya</i>	<i>Kandara, Snayu, Sira, Asthi and Mamsa</i>
<i>Agni</i>	<i>Jataraagni</i>
<i>Agni dhushti</i>	<i>Mandaagni</i>
<i>Srotas</i>	<i>Raktavaha, Mamsavaha, Asthivaha</i>
<i>Srotodushti</i>	<i>Sanga</i>
<i>Udhhavastana</i>	<i>Pakwashaya</i>
<i>Sancharastana</i>	<i>Kati and Adharanga</i>
<i>Vyaktastana</i>	<i>Prusta kati spik jaanu jangha pada</i>
<i>Adhiatana</i>	<i>Prusta, kati</i>
<i>Rogamarga</i>	<i>Madhyama</i>
<i>Sadhyaasadyata</i>	<i>Krichra sadhya</i>

Systemic Examination

CNS – Conscious and oriented to time, place, person

CVS- S1 and S2 heard, no added sounds

R S – NVBS heard, no added sounds heard

GIT- Soft and non tender

Hight- 168cm

Weight- 65kg

BMI - 23

Musculoskeletal System Examination

Gait: Stooped down with antalgic gait

Curvature of spine: Lumbar lordosis present

Deformity- Nil

Door bell sign- Positive at L4- L5, L5-S1

Tenderness – Paraspinal muscle tenderness positive

Range of movement of lumbar spine

Flexion	Not possible
Extension	Not possible
Lateral bending	Not possible

Tests

	Left leg	Right leg
SLR	15* positive	Negative
BREGADS	Positive	Negative
LASSIGUES	Positive	Negative

Heel walk: not possible

Toe walk: not possible

Investigations**MRI Lumbo Sacral Spine**

Posterior central/right paracentral disc protrusion with mild ligamentum flavum thickening at L4-L5 intervertebral disc causing partial spinal canal [1.1cm square] and right lateral recess obliteration, mild compression on the right L5 traversing nerve root.

Posterior central/left paracentral disc protrusion at L5-S1 with mild intervertebral disc causing partial spinal canal [1.3cm square] and left lateral recess stenosis and indentation on the left S1 traversing nerve root.

Treatment Protocol Adopted

Treatment	Duration
<i>Nadi Sweda</i> with <i>Dashamoola Kwatha</i>	7 days, 2 sittings in an interval of 2 hours.
<i>Dry cupping</i>	7 days, 2 sittings for 15 min.
<i>Patra Pinda Seda</i>	7 days

OBSERVATION***Nadi Sweda* and Dry Cupping**

Days	Observation
Day 1 and 2	No changes
Day 3 to 5	Slight relief in pain
Day 5 to 7	Able to stand straight, able to sleep in prone position. Sit straight for 5 min

Patra Pinda Sweda

Days	Observation
Day 1 to 3	Able to stand for more than 15 min Able to sit straight for more than 20 min
Day 3 to 7	Able to walk for more than 2km

Symptoms	Before treatment	After Treatment
Acute low back pain	Severe pain, VAS score =10	Significant relief in pain VAS score = 3
Numbness	Present	Absent
Gait	Antalgic	Able to walk for 2 km
Standing Posture	Stooped down posture	Able to stand straight for more than 15 min
Sleeping posture	Unable to sleep in prone position	Able to sleep in prone position
SLR	15* positive	Negative

DISCUSSION

Ayurveda is a holistic medicine aims to restore the health by understanding the underlying cause of the disease. Ayurveda treats the disease through *Shodhana* and *Shamana* therapies. *Gridhrasi* is one of the *Vatavyadhi* characterized by pain in the lower lumbar region that radiates to the toe, associated with numbness in the lower limb. The patient exhibited the features of *Vatakphaja Gridhrasi*. In this case patient complained of pain in the low-back region which was acute in nature radiating to the left lower limb along with stiffness in the low back region, it was diagnosed as *Vatakphaja Gridhrasi*. Acute pain management was done using *Swedana Karma* followed by dry cupping. *Nadi sweda* with *Dashamoola Kashaya* followed by dry cupping, 2 sittings a day with an interval of 2 hours was given for 7 days.

Nadi sweda^[14] is one among the *Saagni Sweda* and a variety of *Ushma sweda* which is beneficial in *Vatakphaja* disorders especially *Shoola Pradhana Vyadhi*. Here, *Nadi sweda* was given with *Dashamoola Kashaya* which has *Vatakphahara* property. Chemical composition of *Dashamoola* consists of alkaloids, natural steroidal saponin, tannins, flavanoids which acts as analgics, anti-inflammatory, antifungal, anti-bacterial and anti-oxidants which helps in relieving pain and inflammation.

Dry cupping^[15] suction created inside the cup during dry cupping, the skin gradually increases in size to upward because of viscoelastic nature of the skin. Thus application of suction creates negative pressure inside the cups and decrease local pressure (Boyle's law) around capillaries. As the skin is uplifted it will increase blood flow and capillary filtration which then improve vasodilation. Therefore local metabolites and toxins are flushed out from dry cupping.

Cupping therapy stimulates small nerves in muscle and induced secretion of chemical transmitter, such as serotonin, endorphin, and cortisol. The dilution of chemical substances, inflammatory mediators which act as an analgesic will improve oxygenated blood to the affected site. The reoxygenated blood will cause pain relief, reduce stiffness, improve range of movement.

The muscle is a hierarchical structure and it composed of force generating sarcomeres arranged in the bundles of myofibrils, fibers and fascicles. This hierarchal structure determines the muscles mechanical behaviour including stiffness and elasticity.

Cupping therapy has a positive impact on an increase in flexibility of muscle. Cupping therapy may induce as much change in flexibility as passive stretching can be explained by research findings that suggest a mechanical basis for its effect.

Induce free movement of deep fascia and muscles by activating lubrication of superficial fascia between skin and deep fascia. This eases the restriction caused by adhesion of the deep fascia and enables independent movement of muscle thus improving the range of movement.

Patra pinda sweda^[16] was done for next 7 days. *Swedana* is a procedure where stimulating the body temperature by contact with the external heat source, there by producing *Sweda*. The *Ushna Guna* of *Swedana Karma* leads to stimulate the sympathetic nervous system and produces vasodilatation, increases the blood circulation thus resulting in maximum absorption of drugs.

Patra pinda sweda was given using *Vatahara patras* like *Nirgundi*, *Eranda*, *Arka*, *Rasna*, *Shigru*, *Lashuna*, *Saindhava* and *Haridra* processed with *Kottamchukkadi Taila*. The drugs are having *Vata-Kaphahara* property and all the drugs used here have *Ushna Veerya*, *Snigdha* and *Sukshma Guna*. As the drugs used had *Vatakphahara* properties pain and stiffness was effectively managed by *Patra pinda sweda*. The medicinal leaves used in *Patra pinda sweda* has phytochemical constituents like flavanoids, terpenoids, sterols, volatile oils which has analgesic and anti-inflammatory properties.

CONCLUSION

Gridhrasi is one of the *Vataja Nanatmaja Vyadhi* and occasionally *Kapha* is also associated with *Vata Dosha* producing *Vatakphaja* type of *Gridhrasi* exhibiting symptoms like, acute pain in the low back region radiating to lower limbs associated with stiffness. Management of acute pain improves physical and physiological functioning of the patient along with the quality of life. In this case acute pain and stiffness was effectively managed by *Nadi sweda*, cupping and *Patra pinda sweda* giving a hope that acute pain can be effectively managed through *Shamana* therapies mentioned in Ayurveda.

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