



AYURVEDIC MANAGEMENT OF SCIATICA: A CASE REPORT

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ABSTRACT

Sciatica is a neuralgic pain which begins from lumbar region and radiates downwards to buttock, posterior aspect of thigh, calf and to the outer boarder of foot. In about 90% of cases sciatica is caused by a herniated disc with nerve root compression, but lumbar canal stenosis and less often tumors are possible causes. A few personal and

occupational risk factors for sciatica are age, height, mental stress, cigarette smoking and exposure to vibration from vehicles. Sciatica is mainly diagnosed by history taking and physical examination. The peak incidence is between middle-old aged and is higher in men than women. The most applied clinical examination is the straight leg raising test or Lasègue's sign. Conservative treatment for sciatica is primarily aimed at pain reduction, either by analgesics or by reducing pressure on the nerve root. Non-steroidal anti-inflammatory drugs, muscle relaxants, epidural injections of steroid might be effective in patients with acute sciatica. In *Ayurveda*, the symptoms, etiopathogenesis resembles with *Gridhrasi*. Treatment includes sequential administration of *snehana*, *swedana*, *basti*, *sira vyadha*, *agni karma* and certain *shaman yogas*. This patient was treated with *Madhu tailik basti* in the form of yoga basti for 8 days and *Parijata Guggulu* for one month. *Madhu tailik basti* and *Parijata Guggulu* are found to be efficacious in the whole symptom of Sciatica (*Gridhrasi*).

KEYWORDS: *Ayurveda*, *Gridhrasi*, Sciatica, *Madhu Talik Basti*, *Parijata Guggulu*.

INTRODUCTION

Sciatica is a neuralgic pain referred to the muscles supplied by the sciatic nerve.^[1] It is a more common cause of pain and disability. Pain is the distribution of the lumber or sacral root is often due to disc protrusion.^[2] Pain and limitation on SLR is a feature of prolapsed inter vertebral disc, when there is irritation or compression of one of the root of sciatic nerve.^[3] A

symptomatic lumbar disc herniation occur during the lifetime of approximately 2 % of population. Risk factor includes male gender, middle-old age, heavy lifting or twisting, stressful occupation, smoking and mental stress.^[4] Symptoms typically commences with a period of back pain followed by radiating down to buttock, thigh, calf and antero-lateral aspects of foot. There may be parasthesia, motor weakness, loss of reflexes and reduction in SLR.^[5] Pain is exacerbated by coughing or straining. Sciatica hampers the daily routine activity and patient has to suffer a lot. The medical treatment and management includes bed rest, maintaining mobility, analgesics or NSAID, epidural steroid injections, spinal manipulation, traction therapy, physical therapy, multidisciplinary treatment or surgery in later course of the disease.^[6]

In *Ayurveda*, the symptoms, etiopathogenesis resembles with *Gridhrasi*. The cardinal signs and symptoms of *Gridhrasi* are *ruk* (pain), *sthamba* (stiffness), *toda* (pin prickling sensation) starting from *spik*, *kati*, *prista* radiating down to posterior border of *uru*, *janu*, *jangha*, *pada* and impairment of lifting of thigh. In *kaphanubandha*, *tandra*, *gaurva*, *arochaka* are present. Treatment includes *snehana*, *swedan*, *basti*, *siravyedha*, *agnikarma* and *shamanaushadhi* comprises *vednasthapana*, *rasayana* and *nadibalya* drugs.^[7] *Madhu tailik basti* mentioned by *Acharya Sushruta* is a type of *niruha basti* mainly contains *madhu* and *taila* in equal quantity.^[8] In this study *Madhu tailik basti* was administered for a period of 8 days and *shaman aushadhi* that is *Parijata Guggulu* for a period of one month.

CASE STUDY

The purpose of this case study is to describe an *Ayurvedic* treatment program and long-term outcomes for patient with Sciatica. The researcher utilized information from the historical and physical examination to establish an individualized plan of care for the patient. The subjective and objective parameters are assessed by means of interrogation and by ascertaining the signs and symptoms before and after the treatment.

Instrumentation: Scoring pattern was developed according to severity of symptoms.

PAIN

- 0: No pain
- 1: Painful, walks without limping
- 2: Painful, walks with limping but without support
- 3: Painful, can walk only with support
- 4: Painful, unable to walk

STIFFNESS

- 0: No stiffness.
- 1: 20% limitation of normal range of mobility.
- 2: 50% limitation of mobility.
- 3: 75% or more reduction of normal range of movement.

PRICKING SENSATION

- 0: No pricking sensation
- 1: Mild pricking sensation
- 2: Moderate pricking sensation
- 3: Severe pricking sensation

TWITCHING

- 0: No twitching
- 1: Mild twitching (sometime for 10-15 minutes)
- 2: Moderate twitching (daily for 15-30 minutes)
- 3: Severe twitching (daily more than 1 hour)

ANOREXIA

- 0: No anorexia
- 1: Mild anorexia
- 2: Moderate anorexia
- 3: Severe anorexia

DROWSINESS

- 0: No drowsiness
- 1: Mild drowsiness
- 2: Moderate drowsiness
- 3: Severe drowsiness

HEAVINESS

- 0: No heaviness
- 1: Mild heaviness
- 2: Moderate heaviness
- 3: Severe heaviness

PAIN DURING COUGHING

0: No pain

1: Mild pain

2: Moderate pain

3: Severe pain

STRAIGHT LEG RAISING TEST (SLRT)

Angle below 40⁰ – Intra spinal compression

Angle above 40⁰ – Extra spinal compression

SCIATICA NOTCH TENDERNESS (SNT)

0: No tenderness

1: Mild tenderness

2: Moderate tenderness

3: Severe tenderness

Patient description and historical examination findings

Case: A 48-year-old obese businessman suffered from severe low back and right sided leg pain. He had episodic, worsening low back pain with restricted of right leg movements. The intermittent numbness, tingling and pain extended along the right leg progressively increased in frequency and intensity. These symptoms, of insidious onset 6 weeks prior, had caused patient to cease his daily activity e.g. driving, forward bending, continuous sitting, household work or sleeping. General health issues included mild hypertension, 3-year history of migraine and positive smoking history. Past family medical history was non-contributory.

Grading of subjective and objective parameters before treatment

Pain: 3

Stiffness: 3

Pricking sensation: 2

Twitching: 2

Anorexia: 1

Drowsiness: 2

Heaviness: 2

Pain during coughing: 2

Examination**Physical**

Body weight: 94 kg

Heart Rate: 88/min

Respiration Rate: 22/min

Blood pressure: 140/90 mmHg

Systemic

Abdomen: Soft

CVS: S1S2 normal

RS: Bilateral chest clear

CNS: Irritable

Musculoskeletal

Gait: limping gait while walking

Posture: shape of the lumbar spine is altered and the mobility is restricted.

Tenderness (SNT): Moderate tenderness present at Lumbar spine, in the back and limb.

Straight leg raising test (SLRT): Positive 45⁰ (Right leg) and 80⁰ on (Left side)

Lasegue's sign: Positive at 45⁰ on right leg

Investigations

HB – 12.8 gm%

TLC – 7000 cumm

DLC – Neutrophils 56 Lymphocytes 38 Monocytes 4 Basophil 0 Eosinophil 2

ESR – 9 mm/hr

RA Test – Negative

CRP – Negative

Serum Uric Acid – 6.8 mg/dl

TSH – 3.2 mIU/L

Serum Calcium – 9.2 mg/dl

RBS – 176 mg/dl

X-ray – Lumbo-sacral spine (AP and Lateral View) – Straightening of lumbar spine due to muscle spasm, marginal osteophytes present at L5-S1 vertebra with reduced disc space at L4-L5 and L5-S1 vertebra, Osteoporotic changes seen. Impression – Lumbar spondylosis.

MRI – Lumbo-sacral spine – findings are suggestive of -

- Diffuse disc bulge with small right paracentral protrusion at L4-5 level and diffuse disc bulge at L5-S1 causing indentation on the thecal sac with effacement of bilateral neural foramina with probable impingement into the exiting nerve roots.
- Desiccation and reduced height of L3-4 disc.
- Spondylo degenerative changes.

Treatment Schedule

1. *Snehan* with *Sahacharadi taila* for 8 days
2. *Swedan* – *Dashmool kwath nadi sweda* for 8 days
3. *Madhu Tailik Basti* – In a *yoga basti* course (8 days).
 - Dose -720 ml on 2nd, 4th, 6th day morning in empty stomach
 - Along with this 5 *matra basti* with *Saindhavadi taila* in a dose of 60 ml on 1st, 3rd, 5th, 7th, 8th day in the afternoon immediately after food.

Ingredients of *Madhu Tailik Basti*-

- *Erandmool kwath* -340ml
 - *Madhu* – 170ml
 - *Murchit Til taila* – 170ml
 - *Madanphala* – 1 in number
 - *Saindhav lavan* – 10 gm
 - *Satpushpa churna* – 20 gm
4. Oral Medication – *Parijata Guggulu* 2 tab (500mg each) TDS for 1 month

RESULTS

After completion of one month treatment clinical assessments were made from the interrogation and gradation of scoring pattern. There was a drastic change in the parameters as:

Pain: 1

Stiffness: 1

Pricking sensation: 1

Twitching: 1

Anorexia: 0

Drowsiness: 0

Heaviness: 1

Pain during coughing: 0

SLRT: 70⁰ (Right leg) and 90⁰ (Left leg)

SNT: Mild tenderness is present

Lasegue Sign: 70⁰ right leg.

There was improvement in overall functional status after eight days treatment with *Madhu tailik basti*. There was reduction in pain, stiffness, pricking sensation, twitching and anorexia, drowsiness were abolished. The SLR angle was also improved. There was no need to take any pain killer during the treatment. There was no side effect observed during the treatment as well as after the completion of treatment.

DISCUSSION

Gridhrasi is a *shula pradhan vata nanatmaja vyadhi* affecting locomotor system and leaving the person disable from daily routine activity. In the pathogenesis of disease, important components are *vata* and *kapha*. The vitiated *vata* gets lodged in *katipradesh*. The primarily symptom pain which is produced mainly by *vata prakop* and *basti* is best treatment for *vata*. Drugs acting on *vatadosh*, *asthi*, *majja dhatu* and *katisthana* were selected.

Snehan karma stimulates the sensory nerve endings and provides strength to the muscles. *Sahacharadi taila*^[9] comprises mainly *sahachara*, *devadaru*, *sunthi* and *tila taila*. All these drugs are *snigdha*, *ushna*, *vata kaphashamaka* and possess anti-inflammatory and analgesic properties. *Swedan* enhance local microcirculation, by increasing the diameter and blood flow velocity of peripheral arterioles, delivering higher level of oxygen and nutrients to the injured cells. *Dashmool kwath*^[10] *Nadi sweda* are *ushna*, *vata-kaphahara guna*, which also help in relieving symptoms of Sciatica.

Madhu tailik basti mentioned by *Acharya Sushruta* is a type of *niruha basti* mainly contains *madhu* and *taila* in equal quantity. It is free from complications and having broad-spectrum efficacy and it does the purpose of eliminating *doshas* and of improving strength and complexion. It does not require any regimens, may be given at any time, without complication and provides much better results. *Madhu tailik basti* is a treatment for *vatavyadhi* by virtue of its *Rasayana* facilitation.

Madhu is having *madhur rasa*, *kashaya anurasa*, *laghu*, *ruksha*, *yogavahi*, *lekhan guna* and *sheeta virya* which helps to reduce *kapha* and *meda*.^[11] *Tila taila* is having properties like *teekshna*, *ushna*, *madhur rasa* and *vipaka*, *balya*, *rasayana*, *vata-kaphahara* in nature;

nourishes and strengthens all the *dhatu*s and thus alleviates *vata*.^[12] *Snigdha* and *guru guna* decreases *rukshanta* of *vata* and with the help of *ushna guna* and *virya* it alleviates *vata*; the *vikasi* property reduces the spasms. *Erand* is having *madhur, katu, kashaya rasa, snigdha, teekshna, sookshma, ushna, kaphavata shamak, shothahara, vedanasthapana, marga visodaka* properties.^[13] For *Anuvasan, Saindhavadi taila*^[14] was used. Most of the drugs are *vata-kaphaghna* in nature.

As a whole the qualities of drugs in *Madhu tailik basti* are considered as *laghu, ruksha, ushna, teekshna*. Majority of the drugs are having *vata-kapha shamaka* action. Owing to this property, antagonism to *kapha* and *vata* the *basti* helps in significant improvement in sign and symptom of disease. The *teekshna guna* of *basti* help in overcoming the *srotodushti* resulting due to '*sanga*'.

Parijata (Nyctanthes arbortristis) is *tikta rasa, laghu, ruksha, ushna virya, katu vipak, vata kapha shamak* and *vedanasthapana* in nature. It pacifies *vata* due to its *ushna virya* and *kapha* due to its *tikta rasa, katu vipaka, ushna virya and laghu and ruksha guna*.^[15]

Guggulu (Commiphora mukul) is having *pichhila, laghu, sukshma, ruksha, vishada, tikta, katu, kashaya, madhur rasa, katu vipaka, ushna virya, tridoshagna, vedanasthapana, nadibalya, lekshana* and *rasayana* properties.^[16] Combination of above drugs causes potent anti-inflammatory, pain relieving effect.^[17]

CONCLUSION

The present case study signifies the role of *Madhu tailik basti* and *Parijata Guggulu* in the treatment of Sciatica (*Gridhrasi*). The patient can make significant gains in symptoms and SLR angle in relatively short periods of time. Despite the limitations of this case study, conclude that the *Madhu tailik basti* and *Parijata Guggulu* are simple and effective treatment modality for Sciatica without any adverse effects.

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