



A CASE STUDY ON MANAGEMENT OF SCIATICA BY AGNIKARMA: 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 primarily diagnosed with history of taking and physical examination. The peak occurrence is between middle-aged and higher in males than females. The most widely used clinical assessment is a straight leg elevation measure or a Lasègue sign. The primary goal of conservative care for sciatica is to minimize discomfort, either through analgesics or by reducing pressure on the nerve root. Non-steroidal anti-inflammatory medications, muscle relaxants, epidural steroid injections can be useful in acute sciatica patients. 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 Agnikarma therapy performed by innovated Agnikarma probe made by Panchadhatu and oral medication of Parijata Ghanvati. After Agnikarma intervention, there is marked improvement in the whole symptoms of sciatica and in various clinical examinations like SLR, SNT, Lasègue's sign within couple of days.

Keywords: Ayurveda, Gridhrasi, Sciatica, Agnikarma, Parijata Ghanvati.

INTRODUCTION

Sciatica is a significant cause of disease in the working population of the developed countries. This is the most prevalent condition that affects the mobility of the legs, especially in the most active time of life, with low back pain, also people with radicular pain, which is covered by Sciatica Syndrome. It is a neuralgic pain referred to the muscles supplied by the sciatic nerve. It is a more common cause of pain and disability. Pain is the distribution of the lumbar or sacral root is often due to disc protrusion. Pain and limitation on SLR is a feature of prolapsed inter vertebral disc, when there is irritation or compression of one of the roots of sciatic nerve. A symptomatic lumbar disc herniation occurs 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. 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. Pain is exacerbated by coughing or straining. Sciatica hinders day-to-day life and the patient needs to struggle a lot. Hospital care and management includes bed rest, mobility maintenance, analgesics or NSAIDs, epidural steroid treatments, spinal manipulation, traction therapy, physical therapy, multidisciplinary treatment or surgery in later course of the disease.

Gridhrasi is a Shulpradhana Nanatmaja Vatavyadhi which affects the daily routine of patients. Patients suffering from Gridhrasi are not able to walk properly. According to Acharya Charaka, Stambha (stiffness),

Ruka (pain), Toda (pricking sensation) and Spandana (twitching) are the signs and symptoms of Vataja Gridhrasi. Aruchi (anorexia), Tandra (drowsiness) and Gaurava (heaviness) are the additional symptoms of Vatakaphaja Gridhrasi. Gridhrasi is one of the Vatavyadhi. It begins from the hip and eventually descends to the waist, back, leg, knee, shank and foot, impacting these sections with stiffness, distress, stabbing pain and regular trembling.

Ancient Acharyas given the name Gridhrasi as a disease, it may because of patient's gait become similar to the gait of the Gridhra (Vulture). This change in the gait is because of the pain in the back and the lower limbs and the patient starts limping towards the affected side. In Ayurveda science, various modalities of treatment are explained for the management of Gridhrasi. Agnikarma Chikitsa is said to be superior. Several researches have shown that Agnikarma Chikitsa is more effective compared to the other treatments such as oral drugs or even surgeries etc. The approach of Agnikarma has been mentioned in the context of diseases like Arsha, Arbuda, Bhagandar, Sira, Snayu, Asthi, Sandhigata Vata Vikaras and Gridhrasi. Gridhrasi is seen as a panic condition in the society as it is one of the burning problems. On the basis of symptomatology, Gridhrasi may be simulated with the disease sciatica in modern parlance. In modern medicine, the disease sciatica is managed only with potent analgesics, epidural steroid injection, peri-radicular infiltration or some sort of surgical interventions which have their own limitations and adverse effects. Whereas in Ayurveda, various treatment modalities like Siravedha, Agni karma, Basti Chikitsa and palliative medicines are used successfully. All these management tools are cost effective, easy to perform and result oriented treatment of sciatica. Among these, the Agni karma technique tends to be more successful by offering timely relief. It is a classic fact that this suffering is easily cured by Agni karma, and there is no fear of putrefaction and bleeding. References indicate that Agnikarma-treated diseases are less recurring. It eventually creates a balancing impact on the vitiated Vata Dosha. Many Dahana Upkaranas (devices) such as Pippali, Ajashakrit, Godant, Shara, Shalaka, Jambavoshtha, Madhu, Guda, Sneha and various types of metals are used to perform this operation. In this way, we have innovated the Agnikarma probe, which mixes five different forms of metals in different amounts, i.e. Copper 40%, Iron 30%, Zinc 10%, Silver 10%, Tin 10%. This probe can be used for superficially skin burn as well deep for muscle burn. We have found that the innovated probe is also sustain heat for longer period, so it is easy to handle and perform the procedure with less period of time.

AIM OF THE STUDY

There is no promising management available for Sciatica in modern medicine. They use pain control analgesics, NSAIDs, steroids, surgery, which have more side consequences and high economic costs. On the basis of sign and symptoms this disease can be closely correlated with Gridhrasi. Gridhrasi is vatakapha dominated disease. In this condition, Vata is localized in the Katipradesh, getting aggravated, dries up the intervertebral discs and produces stiffness. Agnikarma is considered as best therapy to pacify vatakapha dohas. Due to its Ushan, Sukshma, Ashukari guna. Therefore, vatakapha pacifying management was planned for the present study.

CASE STUDY

The purpose of this case study is to describe an Agnikarma therapy 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. Subjective and objective criteria are determined by means of an interrogation and the identification of signs and symptoms before and after treatment.

Instrumentation: The score pattern was built depending on the severity of the 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 40° – Intra spinal compression
- Angle above 40° – 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 49-year-old visited Shalya OPD of Swami Kalyan Dev State Ayurvedic College & Hospital, Muzaffarnagar with complaint of pain and stiffness in low back along with severe restriction of forward bending and upward elevation of right leg. Pain is constant in nature that becomes worse at night and when weather is cold. He is unable to perform even small tasks due to restricted upward movement of leg. 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 4 weeks prior, had caused patient to cease his daily activity e.g. driving, forward bending, continuous sitting, household work or sleeping. There was a history of treatment for Sciatica from Orthopedic surgeon for last 3 weeks with no significant relief. General health issues included mild hypertension, 3-year history of migraine and positive smoking history. Past family medical history was non-contributory.

Clinical Examination: Dashvidha Pariksha

- | | |
|---------------------------|--|
| 1. Prakriti: Vata Pittaja | 2. Vikriti: Tridoshaja |
| 2. Sara: Avara | 4. Samhana: Avara |
| 5. Satyma: Madhyam | 6. Satva: Madhyam |
| 7. Pramana: Madhyam | 8. Vyayam Shakti: Avara |
| 9. Ahara Shakti: Madhyam | - Abhyarana Shakt: Avara - Jarana Shakti: Avara |
| 10. Vaya: Madhyam | |

General Physical Examination:

- B.P.=130/80mmHg
- P/R = 84/minute
- Weight-84 kg
- Height-5'10"
- Pallor - Negative, Icterus - Negative, Cyanosis - Negative
- Clubbing - Negative, Edema - Negative
- CVS: S1 S2 Normal.
- Chest: Bilateral equal air entry with no added sound
- CNS: Higher function normal, with no loss of memory, no disturbance of speech etc.
- Reflexes: Upper limb-2+, 2+ Lower limb- knee Jerk +, diminished Ankle Jerk - Absent Plantar response – Flexor

Investigations: All routine blood and urine investigations were carried out which seems to be normal. HIV, HBsAg, VDRL were negative. In Plain X-ray of LS Spine shows space diminished between L4 and L5 vertebral bodies. MRI findings confirmed the presence of severe thecal sac compression at L4-L5 and L5-S1 level.

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 45° (Right leg) and 80° on (Left side)

Lasegue's sign: Positive at 45° on right leg

Grading of subjective and objective parameters before treatment

Pain: 3

Stiffness: 3

Pricking sensation: 2

Twitching: 3

Anorexia: 1

Drowsiness: 1

Heaviness: 2

Pain during coughing: 2

Treatment Schedule

After careful assessment and examination, patient was treated with 4 sitting of Agnikarma and oral medication of Parijata Ghanvati 2 BD Approximately 500 gm each with luke warm water for 4 weeks. Vata prakopak ahara-vihar were also restricted during the treatment and follow-up period of 2 months.

Method of Agnikarma

Purvakarma: Agnikarma therapy room should well prepared with all materials and instruments required for the therapy and care of patient in aseptic condition. Freshly prepared Triphala Kwath or Panchvalkal Kwath, Aloe vera leaf, innovated Agnikarma probe, Probe stand, High pressure burner for making the probe red hot, Cylinder, tray, bowl, Sponge holding forceps, Gloves, Sterilised plain and hole towel, Cotton, A knife, Lighter etc. Take written inform consent of the patient. Hold the probe on the burner until it's red. It's barely taken two minutes to get the red probe hot. Ask the patient to lay down on the examination table in a prone posture and relax. Ask the patient when therapeutic burn is made, you just feel like an ant bite for a friction of second and do not move your limbs until the procedure will finish.

Pradhana Karma: Examine the patient carefully and mark the maximum tender points on and around L4 – L5 vertebral bodies and Sciatic notch. Paint the portion by Aseptic solutions like Triphala Kwath, Panchvalkal Kwath. With the use of Red hot Agnikarma probe and skilled hands, give 4-6 therapeutic burn marks with a distance of an inch up to skin level on spinous process and transverse process of L4 and L5 body. Also give 2-3 therapeutic burn marks at the level of sciatic notch. Give 2-3 therapeutic burn marks longitudinally on tendo-Achilles ligament (Antra kandara gulf Madhya) on affected limb. Instantly apply the pulp of Kumari (Aloe vera) leaf hold with swab holding forceps in small piece on the burn marks, as Kumari is working as instant cooling agent.

Pashchat Karma: After a minute, clean the part by cotton and apply 'Shat dhaut ghritam' advice to the patient twice a day continuous for a week and do not apply water on the agnikarma site for next 24 hours. Effect After a week, the patient experienced a marked change in symptoms such as stiffness and back pain. Patients were

improved by stiffness, numbness and tingling feeling. Patients had moderate improvement in multiple clinical examinations of Sciatica.

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 : 0

Pricking sensation : 0

Twitching : 0

Anorexia : 0

Drowsiness : 0

Heaviness : 0

Pain during coughing : 0

SLRT : 70° (Right leg) and 90° (Left leg)

SNT : Mild tenderness is present

Lasegue Sign : 70° right leg.

Examination of right leg	Before treatment	After treatment
SLR	Positive (45°)	Positive (70°)
Reverse SLR	Positive	Negative
Tenderness of sciatic nerve root test	Positive	Negative
Sitting Test	Positive	Negative
Popliteal Compression Test	Positive	Negative

AGNIKARMA

Usna and Tikshna Guna – Pacifies Vata Dosha

Laghu, Sukhsma, Tikshna and Ushna Guna – Pacifies Kapha Dosha

Agnikarma -Therapeutic heat- Tvakdhatu - Aamdosha and Shrotovaigunya - Shotha and Shoola

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.

Probable mode of action of Agnikarma

Pain receptors are located in the skin and the motor end plates of the muscles. These pain receptors are stimulated by application of heat at about 45°C. The pathway for the propagation of thermal signals and pain signals is almost parallel, but terminates in the same place. So out of these two, i.e. thermal and pain, only the greater can be felt. Moreover, Heat Induces metabolism at muscle fibre cells and removes waste products and release the stiffness of the muscles. 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. Properties of Parijata Ghanvati are vata kapha shamak, shothahara (anti-inflammatory), vedanasthapan (analgesic) rasayana (immune modulator and anti-oxidant). After two months, scars of wound disappeared and no adverse effect noted of the treatment.

CONCLUSION

Sciatica is one of the most common problems which effect mostly in middle age group of patients. After Agni karma there is relief of signs and symptoms of Sciatica especially on local tenderness and stiffness. The treatment applied was simple, economical and required no hospitalization and could be done at OPD level. This case report showed that Agnikarma therapy is potent, safe and effective in the treatment of Sciatica (Gridhrasi). There was no any adverse effect found during and after the whole procedure in this case.

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