



REDEFINING PIRIFORMIS SYNDROME MANAGEMENT: INTEGRATIVE HEALING WITH PANCHAKARMA AND CUPPING THERAPY

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<https://doi.org/10.46607/iamj0613042025>

(Published Online: April 2025)

Open Access

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Article Received: 08/02/2025 - Peer Reviewed: 29/03/2025 - Accepted for Publication: 11/04/2025.



ABSTRACT

Background

Piriformis syndrome, caused by sciatic nerve compression from the piriformis muscle, leads to pain and impaired mobility. In Ayurveda, it is primarily associated with *Gridhrasi*, a condition resulting from *Vata dosha* vitiation. This study explores the combined efficacy of Ayurvedic Basti therapy and wet cupping in managing Piriformis syndrome.

Purpose

This study evaluates the combined efficacy of Ayurvedic *Basti* (medicated enema) therapy and wet cupping in reducing pain, improving mobility, and enhancing hip joint function in patients with Piriformis syndrome.

Methods

The treatment protocol involved *Anuvasana Basti* with *Bala Taila* for its anti-inflammatory effects, *Vaitarana Basti* for detoxification, and *Ksheera Basti* for nourishing tissues. Wet cupping, inspired by Ayurvedic *Raktamokshana*, was applied across four sessions to eliminate *Dushita Rakta* (vitiated blood). Key points along the sciatic nerve pathway, including Ashi Point, Huantiao (GB 30), Fengshi (GB 31), Weizhong (UB 40), Chengshan (UB 57), and Kunlun (UB 60), were targeted to reduce *Vata* stagnation and restore function.

Results

Clinical outcomes showed significant improvements: pain scores (VAS) dropped from 9 to 2, the Oswestry Disability Index improved from 88% to 30%, and the Oxford Hip Score rose from 1 to 35, indicating enhanced hip joint function. Cupping therapy alleviated muscle stiffness, improved circulation, and complemented Basti therapy, reducing neurological symptoms and restoring mobility.

Conclusion

This integrative Ayurvedic approach, which includes Basti therapy and wet cupping, effectively addresses Vata dosha vitiation, promotes tissue repair, and significantly improves pain and hip function. Thus, it offers a promising pathway for sustained recovery in Piriformis syndrome.

Keywords: Piriformis Syndrome, Cupping Therapy, Basti Therapy, Gridhrasi.

INTRODUCTION

The piriformis muscle, derived from the Latin term *piriformis* meaning "pear-shaped," is a skeletal muscle located beneath the gluteal muscles. It originates within the pelvic cavity, traverses the greater sciatic notch, and inserts at the superior aspect of the greater trochanter of the femur. Functionally, the piriformis muscle facilitates external rotation of the femur during hip extension and abducts the femur during hip flexion (1).

Piriformis Syndrome (PS) is a clinical condition involving dysfunction or pathology of the piriformis muscle. Patients typically report localized pain in the buttocks, often radiating down the thigh or leg. Physical examination frequently reveals tenderness along the muscle's course, from the sacrum to the greater trochanter, as well as discomfort elicited by pelvic or rectal examinations targeting the piriformis. Provocative manoeuvres, such as the FAIR test (flexion, adduction, and internal rotation), the Pace sign, and the Freiberg test, are commonly used to diagnose PS (2).

The syndrome accounts for approximately 0.3–6% of all cases of buttock and low back pain (3–5). Severe cases can result in intense pain radiating through the buttocks and lower back, numbness in the lower extremities, difficulty in walking, and inability to maintain sitting or supine positions. This significantly impacts daily functioning and quality of life (6).

Much like Piriformis Syndrome, which presents with buttock pain radiating to the thigh, leg, and occasionally the foot, *Gridhrasi* is characterized by *Ruk* (pain), *Toda* (pricking or stabbing pain), and *Mu-*

huspandana (muscle twitching), which radiate from the hip (sphik) down to the lower limbs, including the *Kati* (lower back), *Uru* (thigh), *Janu* (knee), *Jangha* (calf), and *Pada* (foot),(7) thus highlighting the shared patterns of radicular pain and discomfort in both conditions. Additionally, both conditions can result in *Sakthikshepanigraha* (weakness or inability to lift the limbs), (8) further reinforcing the similarity in symptomatology.

In the treatment of Piriformis Syndrome, Ayurvedic therapies such as *Bheshaja* (medications), *Snehana* (oleation), *Swedana* (sudation), *Basti* (medicated enemas), and Cupping Therapy have demonstrated efficacy. Cupping Therapy, comparable to *Siravedha* (bloodletting), is crucial in alleviating pain, reducing inflammation, and improving blood and lymphatic circulation. Wet cupping, in particular, eliminates *Dushita Rakta* (vitiated blood), which Ayurveda identifies as a primary factor in pain and stagnation, thereby unblocking energy pathways.

Basti Karma, a cornerstone treatment for *Gridhrasi*—a condition analogous to Piriformis Syndrome—balances *Vata dosha*, alleviates nerve compression, and enhances detoxification. This approach is instrumental in reducing pain and restoring functionality. The integration of cupping complements *Basti* by promoting tissue oxygenation, removing inflammatory mediators, and enhancing the effects of *Vata* pacification.

From the perspective of Chinese medicine, Cupping Therapy aligns with the concept of Qi, the vital ener-

gy governing movement and balance, akin to *Vata* in Ayurveda. Qi stagnation along the sciatic nerve pathway contributes to pain, stiffness, and dysfunction. By targeting key acupuncture points such as Ashi, Huantiao (GB 30), Weizhong (UB 40), and Chengshan (UB 57) (9), cupping therapy facilitates the smooth flow of Qi, relieves muscular tension, and supports tissue repair. Cupping therapy enhances blood flow and aids in the removal of toxins and metabolic waste from the microcirculatory system (10). This is achieved by improving microvascular circulation, promoting the repair of capillary endothelial cells, accelerating tissue granulation and angiogenesis, and gradually reducing muscle tension, thereby fostering localized tissue healing and relaxation (11). This article explores a holistic treatment paradigm for Piriformis Syndrome, integrating Ayurvedic and Chinese therapies with contemporary management strategies. It emphasizes a comprehensive, patient-centered approach to symptom relief and functional restoration.

2. Patient information

2.1 De-identified demographic and other patient information

A 65-year-old patient residing in Pune and professionally engaged in farming was brought to Dr. D.Y. Patil Ayurved Hospital in Pune by his family for Ayurvedic treatment. He was admitted on 15 January 2024 for further management.

2.2 Main Concerns and symptoms of the patient

The patient has presented symptoms, including weakness in both legs, rendering them unable to walk. The patient reported pain in the buttocks on both sides, with a greater intensity on the right side. Additionally, oedema is observed in the lower limbs, along with occasional tingling sensations in the lower back, which have been occurring for approximately 15 days prior to hospital admission.

2.3 Family and Psychological history, including relevant genetic information.

No History

2.4 Medical History and Relevant Past Intervention and Outcomes

The patient, a farmer by profession, has a known case of hypertension for which he is on regular medication. He has been engaged in strenuous physical activities throughout his life, including heavy lifting. Suddenly, prior to being admitted 15 days ago, He began experiencing weakness in the lower limbs and pain in the buttock region after lifting weights. Gradually, patients' ability to walk deteriorated to the point where they could no longer walk-stand and had difficulty sitting for extended periods.

The patient presented these complaints to a neurotrauma specialist Hospital, where it was recommended that they undergo an MRI scan of the lumbar spine and HIP-sacroiliac (HIP-SI) region for further evaluation. Additionally, medication was presented. Detailed information regarding the patient's drug History is provided in Table 1.

Table1: Detailed drug History

S.no.	Medication	Dose
1.	Tb. Maxgalin ER 75 [Pregabalin (75mg)]	1HS
2.	Tb. Rutoflam [Trypsin(48mg)+Bromelain(90mg)+Rutoside(100mg)+Diclofenac(50mg)]	1BD
3.	Tb. Rejunex CD3 [Calcium Carbonate 500mg, Alpha Lipoic Acid 200mg, Benofotiamine 150mg, Methylcobalamine 1500mcg, Vitamin D3 1000 IU, Inositol 100mg, Chromium Picolinate 200 mcg, Pyridoxine 3mg, Folic Acid 1.5mg]	1OD
4.	Tb. Syner tab [N-acetylglucosamine, Silymarin, Boswellin, Withania somnifera extract, Ginger, Turmeric]	1BD
5.	Tb. Pantanerv NT [Gabapentin (400mg)+ Nortriptyline(10mg)]	1/2HS
6.	Tb. Stamlo 2.5mg [Amlodipine (2.5mg)]	1OD
7.	Tb. Ecospirin 75 [Aspirin 75mg]	1HS

3. Clinical Findings

3.1 Ashtavidha parikshana/ Eight-fold examination

Nadi (Pulse)- Vata-Kapha dominant, Mutra (Urine)-Normal, Mala (Bowels)-Normal, Jivha (Tongue)- Coated (Sama), Shabda (speech)- Normal, Druka (Eye)-No abnormalities, Aakruti (Built)- Pravar, Sparsh (Skin)- Anushnasheeta (Normal)

3.2 Systemic Examination

CVS-S1S2 audible, RS-Air bilateral equal, CNS-conscious and oriented.

3.3 General Examination

The detailed locomotor examination is mentioned in Table 2.

Table 2: Locomotor examination in detail

Inspection	Gate-antalgic gait, Foot drop gait No deformity of spine lordosis Motor power- normal in both lower limbs
Palpation	1. Tenderness present over the piriformis muscle belly while palpating at greater sciatic notch. 2. Piriformis sign—positive, i.e., pain in a supine position when the patient is relaxed, the ipsilateral foot is externally rotated, and active effort is made to bring the foot in the midline. 3. SLRT(Straight leg raise test)-positive in both legs at 45 degrees. 4. FAIR sign- positive. 5. Piriformis signs positive.
Radiological Investigation	MRI- Lumbar spine Changes of lumbar spondylosis. D11-D12, D12-L1 mild compression, cord flattening. L1-L2 right para central disc bulge with a focal annular disc tear without significant canal stenosis, thecal sac or cauda equina compression. L3-L4 right para central sequestered disc material/dural calcification contributing to moderate bony canal stenosis, compression over the thecal sac, nerve roots of cauda equina, right traversing L4 nerve root in lateral recess. L5-S1 right para central disc protrusion compressing right traversing S1 nerve root in lateral recess. MRI-HIP-SI No abnormal bone marrow oedema on STIR or joint effusion. Mild oedema overlying greater trochanters of bilateral femur in the region of trochanteric bursa.

4. Diagnostic Assessment

4.1 Diagnostic criteria

4.1.1 Investigations

ESR (Erythrocyte Sedimentation Rate) is a recommended diagnostic test for assessing active inflammation, while MRI of the lumbar spine is advised for

evaluating spine pathology. An MRI of the hip and SI joint has been recommended in cases of suspected hip joint pathology.

4.1.2 Diagnostic criteria and outcome measures

Pain intensity was quantified using the Visual Analogue Scale (VAS), complemented by assessments of

walking time and hip joint range of motion. The influence of back pain on daily functioning was systematically evaluated through the Oswestry Disability Index (ODI), which also encompassed the measurement of walking duration. Functional outcomes and the severity of hip-related symptoms were meticulously gauged using the Oxford Hip Score (OHS). Additionally, a comprehensive neurological examination was conducted, focusing on sensory and motor function. Collectively, these assessments offered a thorough and nuanced evaluation of the patient's condition, as well as the effectiveness of the treatment regimen.

4.1.3 Etiopathogenesis

The patient, a farmer, endured prolonged physical exertion over an extended period, which served as a significant causative factor leading to the aggravation of *Vata Dosha*. Additionally, the consumption of *Guru Aahara* (heavy, difficult-to-digest foods) and *Nitya Dugdha* (daily intake of milk) contributed to *Kapha Vriddhi* (excessive accumulation of Kapha).

The persistent intake of *Viruddha Ahara* (incompatible foods), such as the combination of milk and cha-pati over a prolonged period, resulted in the for-

mation of *Ama* (toxic metabolic waste), caused by *Mandagni* (weakened digestive fire). The accumulated *Ama* obstructed the *Srotas* (channels), aggravating both *Vata* and *Kapha*, leading to *Margavarodha* (blockage of pathways) and *Strotorodha* (obstruction of the channels).

As a result, the *Vata Prakopa* became localized in the lower back and hip region, leading to compression of the piriformis muscle and sciatic nerve. This caused significant pain in the buttocks, making it extremely difficult for the patient to sit or walk, a common complaint in Piriformis Syndrome. The pain was radiating, with associated numbness and restricted movement. The *Vata* aggravation led to pain, stiffness, and spasms, while *Kapha* contributed to swelling and obstruction. This combination of *Vata* and *Kapha* disturbances manifested as *Ruk* (pain), *Toda* (pricking sensation), *Muhuspandana* (twitching), and severe pain radiating from the buttocks to the lower limbs, resulting in difficulty in daily activities such as sitting or walking. These clinical manifestations align with the symptoms of *Gridhrasi* (sciatica) in Ayurveda.

5. Therapeutic intervention

5.1 Internal Administration

Table 3: Ayurvedic Internal Medications for Comprehensive Care

Sl.No.	Medicine	Content	Duration/Dose	Rationale
1.	<i>Agnitundi vati</i> (250mg) (Baidyanath)	<i>Suta</i> (purified mercury), <i>Visha</i> (Aconitum ferox), <i>Gandhaka</i> (purified sulphur), <i>Ajamoda</i> (Trachyspermum roxburghianum), <i>Haritaki</i> (Terminalia chebula), <i>Vibhitaki</i> (Terminalia bellerica), <i>Amalaki</i> (Embllica officinalis), <i>Svarji kshara</i> , <i>Yava kshara</i> , <i>Vahni</i> (Plumbago zeylanica), <i>Saindhava</i> (rock salt), <i>Jeeraka</i> (Cuminum cyminum), <i>Sauvarchala salt</i> , <i>Samudra</i> (common salt), <i>Vidanga</i> (Embelia ribes), <i>Borax</i> , <i>Vishamushti</i> (purified Strychnos nux vomica), Lemon juice.	15/01/2024 (3 days/2 tabs twice a day)	<i>Deepana-Pachana</i>
2.	<i>Ekgaveera Rasa</i> (125mg)	<i>Swarna Bhasma</i> (Gold Bhasma), <i>Rajata Bhasma</i> (Silver Bhasma), <i>Loha Bhasma</i> (Iron Bhasma), <i>Abhraka Bhasma</i> (Mica Bhasma), <i>Shuddha Gandhak</i> (Purified Sulphur), <i>Tamra Bhasma</i> (Copper Bhasma), <i>Shuddha Parada</i> (Purified Mercury)	15/01/2024-13/2/2024 (30 days/2 tabs twice a day)	It acts as a <i>Vatashamaka</i> (Vata-pacifying agent) and a <i>Rasayana</i> (rejuvenator or re-

		, Vidanga (<i>Embelia ribes</i>), Shunthi (<i>Zingiber officinale</i>), Maricha (<i>Piper nigrum</i>), Pippali (<i>Piper longum</i>), Tankana (<i>Borax</i>), Vatsanabha (<i>Aconitum ferox</i>)		storative tonic)
3.	<i>Eranda taila</i> (Sudhatatva pharmacy)	Castor oil (<i>Ricinus communis</i>)	15/01/2024-13/2/2024 (30 days/10ml at night)	
4.	Decoction	<i>Gokshura</i> (<i>Tribulus terrestris</i>), <i>Erandamoola</i> (<i>Ricinus communis</i>), <i>Nirgundi</i> (<i>Vitex negundo</i>), <i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Rasana</i> (<i>Alpinia calcarata</i>), <i>Bala</i> (<i>Sida cordifolia</i>)-each 4gm	15/01/2024-13/2/2024 (30 days/ 40ml twice a day)	All these drugs are <i>Vatashamaka</i> (pacify Vata) and <i>Shoolahara</i> (alleviate pain).
5.	<i>Parijataka Ghanavati</i> (250mg) (Chaitanya Pharmacy)	<i>Parijat</i> (<i>Nycanthes arbor</i>)	25/1/2024-13/2/2024 (20 days/4 tabs twice a day)	
6.	<i>Dashamoolarishta</i> (Baidyanath)	<i>Munakka</i> (<i>Vitis vinifera</i>), <i>Sona Chhal</i> (<i>Sonchus oleraceus</i>), <i>Nirmali Beej</i> (<i>Strychnos nux-vomica</i>), <i>Kapittha</i> (<i>Feronia limonia</i>), <i>Nagakeshara</i> (<i>Mesua ferrea</i>), <i>Pipal</i> (<i>Ficus religiosa</i>), <i>Javitri</i> (<i>Myristica fragrans</i>), <i>Tej Patta</i> (<i>Cinnamomum tamala</i>), <i>Ilaichi Badi</i> (<i>Elettaria cardamomum</i>), <i>Dalchini</i> (<i>Cinnamomum verum</i>), <i>Lavang</i> (<i>Syzygium aromaticum</i>), <i>Jaiphal Chhilkedar</i> (<i>Myristica fragrans</i>), <i>Khash</i> (<i>Sugandha Wala</i>) (<i>Vetiveria zizanoides</i>), <i>Kankoul/Kababchini/Seetalchini</i> (<i>Piper cubeba</i>), <i>Varahi Kand</i> (<i>Pueraria tuberosa</i>), <i>Ashwagandha</i> (<i>Withania somnifera</i>), <i>Shatavari</i> (<i>Asparagus racemosus</i>), <i>Kakada Singi</i> (<i>Buchanania lanzan</i>), <i>Indra Jau</i> (<i>Cenchrus ciliaris</i>), <i>Nagarmotha</i> (<i>Cyperus rotundus</i>), <i>Padam Kastha</i> (<i>Stereospermum suaveolens</i>), <i>Souph</i> (<i>Foeniculum vulgare</i>), <i>Haldi</i> (<i>Curcuma longa</i>), <i>Kachoor</i> (<i>Zingiber zerumbet</i>), <i>Supari</i> (<i>Areca catechu</i>), <i>Rasna</i> (<i>Pluchea lanceolata</i>), <i>Renuka Beej</i> (<i>Feronia limonia</i>), <i>Nishoth</i> (<i>Operculina turpethum</i>), <i>Jeera Syaha</i> (<i>Cuminum cyminum</i>), <i>Anant Mool</i> (<i>Sariva</i>) (<i>Hemidesmus indicus</i>), <i>Priyangu</i> (<i>Callicarpa macrophylla</i>), <i>Chavya</i> (<i>Piper longum</i>), <i>Jatamamsi</i> (<i>Muramashi</i>) (<i>Nardostachys jatamansi</i>), <i>Punarnava Mool</i> (<i>Boerhavia</i>	25/1/2024-13/2/2024 (20 days/3tsp BD)	It acts on the vitiated Vata and Kapha Dosha, it has anti-inflammatory, analgesic and Balya (Strengthening) and Shothahara (anti-edematous) properties.

		<p><i>diffusa</i>), Baheda Chhilka (<i>Terminalia bel-lerica</i>), Bharangi (<i>Clerodendrum serratum</i>), Mulethi (<i>Glycyrrhiza glabra</i>), Vayvidang (<i>Embelia ribes</i>), Deodaru Guliya (<i>Cedrus deodara</i>), Manjishta (<i>Rubia cordifolia</i>), Harad Badi (Haritaki) (<i>Terminalia chebula</i>), Vijay Sar (Beeja) (<i>Saraca asoca</i>), Khadir Sar (Khair) (<i>Acacia catechu</i>), Jawasa/Dhamasha (<i>Andrographis paniculata</i>), Aawala Kali (<i>Phyllanthus emblica</i>), Giloya Sukhi (Guduchi) (<i>Tinospora cordifolia</i>), Lodhra Chhal (<i>Symplocos racemosa</i>), Pushkar Mool (<i>Inula racemosa</i>), Chitrak Mool (<i>Plumbago zeylanica</i>), Gambhari Chhal/Phal (<i>Gmelina arborea</i>), Patla Chhal (<i>Ficus carica</i>), Arni Panchang (<i>Tamarindus indica</i>), Belchhal (<i>Aegle marmelos</i>), Gokharu (<i>Tribulus terrestris</i>), Kateri Badi (<i>Solanum xanthocarpum</i>), Kateri Chhoti (Kantakari) (<i>Solanum nigrum</i>), Prushta Parni (<i>Thunbergia laurifolia</i>), Shalaparni (<i>Desmodium gangeticum</i>), Dhaiphool (<i>Hibiscus rosa-sinensis</i>), Jaggery.</p>	
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5.2 Panchakarma Therapies

Table 4: External Therapies for Holistic Healing

Sl.No.	Intervention	Content	Duration
1.	<i>Sarvanga Snehana</i>	<i>Bala taila</i>	15/01/2024 (30 days)
2.	<i>Sarvanga Swedana with Nadi sweda</i>	<p><i>Dashmoola kwath - Shaliparni (Desmodium gangeticum), Prishniparni (Uraria picta), brihati (Solanum indicum), Kantakari (Solanum xanthocarpum), gokshura (Tribulus terrestris), Bilva (Aegle marmelos), Gambhari (Gmelina beechwood), Patala (Stereospermum suaveolens), Agnimantha (Premna serratifolia), Syonaka (Oroxylum indicum) tila taila (Sesamum indicum) (equal quantity)</i></p>	15/01/2024 (30 days)
3.	<i>Basti – Anuvasana basti</i>	<p><i>Anuvasana basti (120ml)- Bala tail- 100ml Saindhava- 10gm Honey-10gm</i></p>	<p>19/01/2024-02/02/2024 (15 days) AVAVAVAVAVAVAAA 03/02/2024-10/02/2024 (8 Days) Ksheera basti</p>
	<i>Vaitarana basti</i>	<i>Vaitarana basti (260ml) -</i>	

		<p><i>Amla (Tamarindus indica)-40gm</i> <i>Jaggery-20gm</i> <i>Rock salt-10gm</i> <i>Go mutra-160ml.</i> <i>Till taila-30ml</i></p>	
	<i>Ashwagandhadi ksheer basti</i>	<p><i>Ashwagandhadi Ksheer basti (280ml)-</i> <i>Decoction- Ashwagandha (Withania somnifera), Gokshura (Tribulus terrestris), Eran-damoola (Ricinus communis), Nirgundi (Vitex negundo), Rasana (Alpinia calcarata), Bala (Sida cordifolia)-each 7gm</i> <i>Ksheera (milk)- 120ml</i> <i>Panchatikta Ghrit-60ml</i> <i>Bala taila-60ml</i> <i>Honey-40gm</i></p>	
4.	Cupping Therapy	Bloodletting cupping	4 Sitting at- Ashi point, Huantiao (GB 30), Fengshi (GB 31), Weizhong (UB 40) point, Chengshan (UB 57), Kunlun (UB 60).

A well-structured treatment plan was carried out for the patient, starting with *Sneha* (oil massage) using *Bala Taila* for 25 minutes. Due to the patient’s sensitivity to pressure, *Samvahana* (gentle massage) was performed instead of a deep massage. This was followed by *Nadi Swedana* (steam therapy) using *Dashmoola Kwatha* for 15 minutes to promote relaxation and improve circulation.

The next phase involved a *Kala Basti Karma* protocol. During the first 15 days, *Anuvasana Basti* (120 ml) with lukewarm *Bala Taila* was alternated with *Vaitarana Basti* (260 ml), resulting in 8 sessions of *Anuvasana Basti*.

For the following 8 days, the regimen of *Ashwagandhadi Ksheera Basti* (280ml), completing a 28-day course. In total, the patient received 9 sessions of

Anuvasana Basti, 6 sessions of *Vaitarana Basti*, and 8 sessions of *Ashwagandhadi Ksheera Basti*.

Additionally, bloodletting cupping therapy was strategically administered at key sites of pain, with targeted application at specific points such as Ashi Point, Huantiao (GB 30), Fengshi (GB 31), Weizhong (UB 40), Chengshan (UB 57), and Kunlun (UB 60). This therapeutic intervention was repeated across four sessions, yielding significant relief by effectively addressing localized pain, reducing muscle tension, and alleviating discomfort along the sciatic nerve pathway. The focused application of cupping therapy not only facilitated the removal of stagnated blood but also promoted enhanced circulation and improved mobility in the affected regions.

6. Assessment

Table 5: Evaluation of Pain Reduction and Quality of Life Enhancement

Test	Before Treatment	After Treatment
VAS Score	9	2
Oswestry Disability Index	88%	30%
Oxford Hip Score	1	35

Table 6 : Assessment of Walking Time and Functional Mobility

Assessment parameter	Before Treatment	After Treatment
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Walking Time (without Aid)	Unable to walk without aid	20 minutes of walking without aid, with very minimal discomfort.
Walking Time (with Aid)	Less than 5 minutes with aid and support, with significant discomfort.	45 minutes with aid, minimal discomfort, and stable gait.

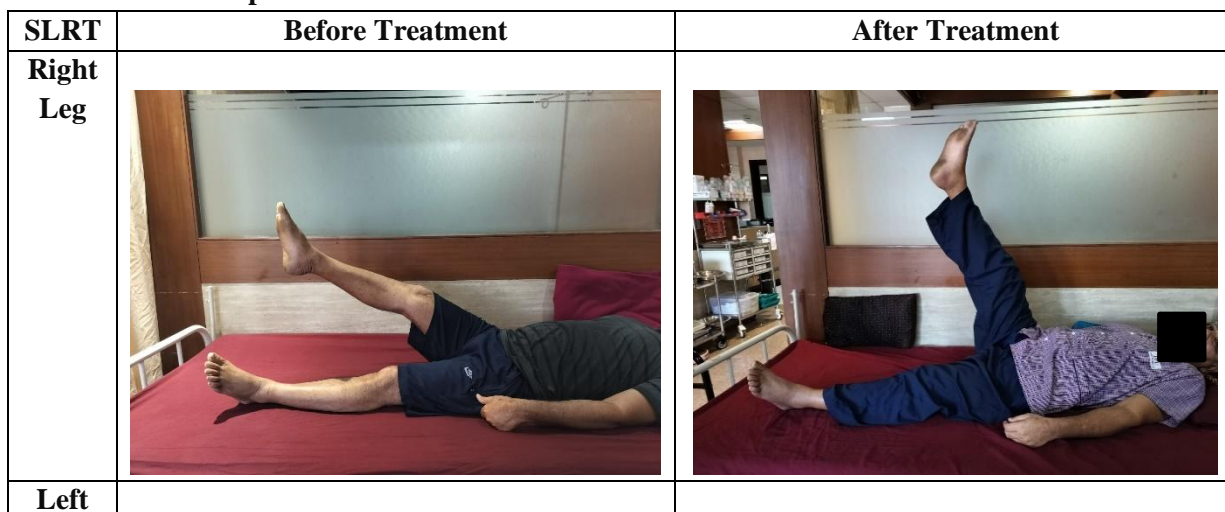
Table 7: Assessment of Hip Joint Range of Motion

Sl.No.	Motion	Range Before Treatment		Range After Treatment	
		Right	Left	Right	Left
1.	Hip Flexion	80 degrees with pain	90 degrees with pain	100 degrees with mild pain	110 degrees without pain
2.	Hip External Rotation	20 degrees	30 degrees	30 degrees	40 degrees
3.	Hip Abduction	15 degrees	25 degrees	25 degrees	30 degrees
4.	Internal Rotation	10 degrees	20 degrees	20 degrees	30 degrees
5.	Straight Leg Raise (SLR)	Positive at 45 degrees	Negative at 60 degrees	Negative at 80 degrees	Negative at 80 degrees

Table 8: Neurological Examination Assessment

Parameter	Before Treatment	After Treatment
Sensory Examination	Paraesthesia in posterior thigh, calf, and foot.	Reduced paraesthesia
	Marked hyperalgesia over the piriformis muscle.	Significant reduction in hyperalgesia.
Motor function	Weakness in hip abduction and external rotation.	Improved strength in hip abduction and external rotation.
Reflexes	Patellar and Achilles reflexes intact symmetrical.	Patellar and Achilles reflexes intact symmetrical.
Gait Analysis	Patient was unable to walk, but when walk with support the gait was analgesic.	Gaits improve, reduce limping and able to walk without support.
FAIR Test	Positive, with sharp radiating pain	Positive, very mild pain present.
Piriformis Test	Positive, eliciting sharp pain during palpation or passive stretching of the piriformis muscle.	Very mild discomfort during palpation, no radiating pain.

Figure;1 Assessment of Straight Leg Raise Test (SLRT) was conducted both before and after treatment to evaluate the therapeutic outcomes.





7. Outcomes

After administering the internal medicine and completing a session of Basti therapy along with cupping therapy, the patient exhibited remarkable improvements across multiple parameters. Pain intensity, as measured by the Visual Analogue Scale (VAS), decreased dramatically from a score of 9 (severe pain) to 2 (mild pain), reflecting a significant reduction in pain levels. The Oswestry Disability Index (ODI) improved from 88% (indicating severe disability) to 30%, showing a marked decrease in disability and a notable enhancement in the patient's ability to perform daily activities. The Oxford Hip Score (OHS) increased from 1 to 35, demonstrating considerable improvement in functional outcomes related to the hip joint.

In terms of walking ability, the patient, who was previously unable to walk without aid, was able to walk for 20 minutes with minimal discomfort after treatment. Walking time with aid also showed significant improvement, increasing from less than 5 minutes to 45 minutes with minimal discomfort, and the patient's gait became more stable.

Range of motion (ROM) of the hip joint showed considerable improvement as well. Hip flexion increased from 80° (with pain) to 100° (with mild pain) on the right side, and from 90° (with pain) to 110° (without pain) on the left. External rotation, abduction, and internal rotation of the hip also improved on both sides, with hip flexion, external rotation, and internal rotation showing increased degrees of motion with less pain. Additionally, the Straight Leg Raise (SLR) test, which was initially positive at 45°, became nega-

tive at 80° in Right side, indicating improved flexibility and pain reduction.

Neurologically, the patient experienced significant reductions in paraesthesia and hyperalgesia in the posterior thigh, calf, and foot. Notable improvement was observed in strength in hip abduction and external rotation, while reflexes remained intact and symmetrical. Gait analysis revealed a substantial reduction in limping, with the patient able to walk without support. The FAIR test, which was initially positive with sharp radiating pain, now resulted in very mild discomfort, and the Piriformis test, initially positive with sharp pain during palpation and stretching, showed only mild discomfort without radiating pain.

DISCUSSION

Piriformis syndrome, characterized by sciatic nerve entrapment due to spasm or inflammation of the piriformis muscle, closely resembles the Ayurvedic condition *Gridhrasi*. In Ayurveda, *Gridhrasi* is classified as a *Vata nanatmaja Vyadhi* (12), primarily caused by the vitiation of *Vata dosha*, with *Kapha avarana* (obstruction by *Kapha*) as an additional pathological factor in this case. It manifests as radiating pain originating in the buttock region and extending down the lower limb, often accompanied by stiffness, numbness, and tingling sensations.

According to Ayurveda, the management of *Gridhrasi* involves therapies like *Siravedha* (bloodletting) and *Basti Chikitsa* (medicated enema) (13-16). In this particular case, an integrative approach was adopted, combining Ayurvedic Panchakarma therapies, especially *Basti Chikitsa*, with wet cupping therapy for bloodletting. The points used for cupping

were selected based on Chinese medicine, targeting areas specific to sciatic pain and muscle spasm relief. This interdisciplinary integration of Ayurvedic and Chinese therapeutic techniques provided an effective treatment approach for addressing both the systemic dosha imbalance and localized symptoms in Piriformis syndrome.

Kala Basti Karma

In the administration of *Kala Basti*, *Anuvasana Basti* was performed using *Bala Taila*, which is known for its sweet (*Madhura*) taste, smooth (*snigdha*) texture, and oily (*picchila*) quality, is recognized for its properties of balancing *Vata*, providing strength (*Balya*), and promoting nourishment (*Brimhana*). The anti-inflammatory and analgesic effects of *Sida cordifolia* (*Bala*), the main component of *Bala Taila*, effectively addressed tissue degeneration (*dhatu kshaya*) and alleviated inflammation around the piriformis muscle (17).

Subsequently, *Vaitarana Basti*, which is indicated in conditions such as *shoola* (pain), *shopha* (inflammation), *anaha* (bloating), *amavata*, *Vatakaphaja* disorders, *Gridhrasi*, and other conditions requiring *srotoshodhana* (channel purification), was utilized (18,19,20). In this case, *Vaitarana Basti* was employed initially to alleviate *Kapha Avarana* (obstruction caused by *Kapha*) and eliminate *ama* (toxins). Its formulation, comprising jaggery, milk, and sesame oil, effectively cleared the obstruction in the *srotas* (channels) can be eliminated due to anti-inflammatory benefit attributed to *Amleeka* thus creating an ideal foundation for subsequent therapeutic interventions (21,22). *Anuvasana* and *Vaitarana Basti* were administered alternately for 15 days, ensuring a synergistic approach to both detoxification and nourishment.

Ksheera Basti

Following the preparatory detoxification phase, *Brimhana Basti* was administered to nourish the affected tissues and restore functional balance. The formulation incorporated *Tikta Rasa Pradhana Dravyas* such as *Ashwagandha* (*Withania somnifera*), *Erandamoola* (*Ricinus communis*), *Nirgundi* (*Vitex negundo*), *Rasana* (*Pluchea lanceolata*), *Bala* (*Sida*

cordifolia), and *Panchatikta Ghrita*, which possess *Kharatva* (roughness) and *Shoshana* (drying) qualities, enabling deep penetration into the tissues and facilitating nourishment of the deeper dhatus (tissues). These herbs, characterized by their *snigdha* (unctuous) nature, impart the *Brimhana* action, ensuring the nourishment and rejuvenation of the affected areas.

This regimen was continued for eight days, as the *snigdha dravyas* (unctuous substances) mitigated any risk of *Vata Prakopa* (aggravation of *Vata dosha*). By incorporating *Ksheera* (milk) as the primary ingredient, *Ksheera Basti* offers dual therapeutic effects both as a *Shodhana* (purification) and *Snehana* (nourishment) therapy. This makes it comparable to both *Niruha* and *Anuvasana Basti* (23), while also relieving *Margavarodha* (obstruction of channels) and promoting the *Brimhana* effect, thereby supporting tissue repair and balance.

Cupping therapy

Cupping therapy, akin to *Raktamokshana* in Ayurveda, was integrated into the treatment plan to complement the effects of *Basti therapy*. *Raktamokshana* is accepted as *Ardha chikitsa* in Shalaya tantra just like *Basti* in *Kayachikitsa*. Wet cupping, performed over four sessions, aimed to eliminate *Dushita Rakta* (vitiated blood) and promote tissue oxygenation. In Ayurvedic practice, it is recommended to expel *Dushita Rakta* (impure blood) to eliminate *Avarana* (obstructions) and restore the proper flow of bodily functions. One of the techniques employed in *Raktamokshana*, *Shringa Avacharana*, is comparable to the Chinese cupping therapy, as both focus on drawing out stagnant or impure blood from the affected region. This helps to enhance circulation, reduce pain, and promote healing. Cupping therapy, like *Shringa Avacharana*, is specifically designed to improve blood flow and alleviate discomfort by addressing the stagnation of bodily fluids. The cupping points were selected based on Chinese medicine perspectives, targeting key areas of pain and dysfunction along the sciatic nerve pathway. The Ashi Point, located at the primary site of pain and muscular tension in the buttock region, was targeted first. Huantiao

(GB 30), near the greater trochanter, helped alleviate radiating pain and stiffness in the hip and lower limb, while Fengshi (GB 31) addressed muscle tightness and Qi stagnation along the sciatic nerve pathway (24,9).

In Ayurveda, Qi is closely correlated with *Vata*, the dosha responsible for movement and circulation within the body. Just as *Vata* governs the flow of vital forces, energy, and impulses, Qi in Chinese medicine is seen as the vital energy that sustains all life processes (24). Stagnation of *Vata* or Qi, especially along the sciatic nerve pathway, can result in pain, stiffness, and dysfunction. Cupping therapy helps to unblock these stagnations, promoting smooth flow and restoring balance, ultimately alleviating pain and improving mobility. The Weizhong (UB 40) point, acting as the command point for the lower back, was used to alleviate stiffness and stagnation of both *Vata* and Qi. For referred pain and circulation enhancement in the lower limb, Chengshan (UB 57) along the calf was targeted. Lastly, Kunlun (UB 60) near the ankle helped regulate sciatic pain along the lower limb trajectory and balanced *Vata dosha* (25).

The suction effect of the cupping facilitated the removal of inflammatory mediators, reduced muscle stiffness, and improved mobility by enhancing localized circulation. This integrative approach worked synergistically with Ayurvedic therapies, promoting comprehensive relief from pain and dysfunction.

CONCLUSION

In conclusion, the integrative approach to treating Piriformis Syndrome, combining Ayurvedic therapies with targeted cupping techniques, demonstrates a comprehensive and effective method for addressing both systemic imbalances and localized symptoms. Ayurveda, with its profound understanding of conditions like *Gridhrasi*, employs therapies such as *Basti Chikitsa* and *Siravedha* (bloodletting) to manage sciatic nerve-related disorders. Notably, the ancient Ayurvedic practice of *Shringa Avacharana*, which utilizes horn-shaped instruments to perform *Raktamokshana* (bloodletting), can be correlated with the principles of modern cupping therapy. While *Shringa*

was historically used as an instrument for blood-letting, modern cupping adopts similar concepts of drawing out stagnated blood to relieve pain and restore balance.

In this case, cupping therapy was utilized to target specific areas along the sciatic nerve pathway, enhancing the effectiveness of the treatment. The selected points, such as Ashi Point, Huantiao (GB 30), Fengshi (GB 31), Weizhong (UB 40), Chengshan (UB 57), and Kunlun (UB 60), addressed pain, muscle tension, and stagnation, aligning with Ayurvedic principles of balancing *Vata* and *Kapha* doshas.

The use of *Kala Basti* and *Ksheera Basti* provided purifying and nourishing effects, facilitating the healing of tissues and restoring functional equilibrium. Complementary cupping therapy further aided in removing stagnated blood, reducing inflammation, and enhancing tissue oxygenation. This integrative approach offered significant symptomatic relief while addressing the root causes of Piriformis Syndrome and *Gridhrasi*, delivering a holistic and effective solution for improving the patient's overall quality of life.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Neha Saini et al: Redefining Piriformis Syndrome Management: Integrative Healing with Panchakarma and Cupping Therapy. *International Ayurvedic Medical Journal* {online} 2025 {cited April 2025}