

**A CASE REPORT ON EFFICACY OF MARMA CHIKITSA IN
MANAGEMENT OF PIRIFORMIS PAIN SYNDROME****Dr. Mohini Rajoriya^{*1}, Dr. Rita Marwaha², Dr. Pankaj Gupta, Dr. Nisha Bhalerao⁴**¹M.D. Scholar, PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.)

Ayurveda College and Institute, Bhopal (M.P.), India.

²Professor & HOD, PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.)

Ayurveda College and Institute, Bhopal (M.P.), India.

³Associate Professor PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.)

Ayurveda College and Institute, Bhopal (M.P.), India.

⁴Associate Professor PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.)

Ayurveda College and Institute, Bhopal (M.P.), India.

Article Received on 24 Sept. 2026,

Article Revised on 14 Oct. 2026,

Article Published on 16 Oct. 2026,

<https://doi.org/10.5281/zenodo.23432677>***Corresponding Author****Dr. Mohini Rajoriya**

M.D. Scholar, PG Department of
Rachna Sharir, Pt. Khushilal Sharma
Govt. (Auto.) Ayurveda College and
Institute, Bhopal (M.P.), India.



How to cite this Article: Dr. Mohini Rajoriya^{*1},
Dr. Rita Marwaha², Dr. Pankaj Gupta, Dr. Nisha
Bhalerao⁴ (2026). A Case Report On Efficacy
Of Marma Chikitsa In Management Of
Piriformis Pain Syndrome. World Journal of
Pharmaceutical Research, 15(20), 1433–1440.

This work is licensed under Creative Commons
Attribution 4.0 International license.

INTRODUCTION

Piriformis Pain syndrome is a neuromuscular condition characterized by compression of the sciatic nerve by the piriformis muscle, which is located deep in the buttock region. when this muscle becomes tight, spasms, or presents with anatomical variations, it can compress the sciatic nerve, leading to pain and neurological symptoms along the sciatic nerve pathway.^[1] Compression of the sciatic nerve by the piriformis muscle can produce buttock pain radiating along the posterior aspect of the ipsilateral lower limb, thereby mimicking lumbar radicular pain or sciatica. The considerable overlap in clinical presentation with lumbar spine disorders makes piriformis syndrome difficult to diagnose and may result in it being overlooked or misattributed to a spinal source of sciatica.^[2,3] Although traditionally considered an uncommon diagnosis, contemporary epidemiological data suggest that Piriformis Pain

syndrome may be responsible for 0.3% to 6% of all low backache and sciatica cases.^[4] The annual prevalence rate of newly diagnosed cases of low back pain and sciatica is 40 million. The incidence rate of Piriformis Pain syndrome is 2.4 million per year, and it occurs mainly

in middle-aged patients of the female gender^[5] Piriformis Pain syndrome occurs frequently during the fourth and fifth decades of life; found in individuals of all occupations and activity levels. Jawish, et al. found only 26 of 3,550 complaining of sciatica were found to have piriformis syndrome.^[4] As much as 50 percent of patients with Piriformis Pain syndrome have a history of trauma direct from buttock contusion or a hip/lower back torsional injury.^[2] Initially, non-operative treatments measures such as internal medications, e.g., Non-Steroidal Anti-inflammatory Drug (NSAID), Muscles relaxant, Pregabalin or Gabapentin (especially for neuropathic pain), local anesthetic agent (Lidocaine and Triamcinolone), Botulinum toxin (BTX), local injection or and physiotherapy (piriformis stretching) are standard in clinical practice for its management. Surgery is the last consideration in such a patient, especially those who don't respond to conservative therapy, including physical exercise.^[6] However, all these conventional measures have specific limitations, such as symptomatic relief, multiple side effects, or specific contraindications. Therefore, it is highly needed to focus on effective but safe measures in alternative science, e.g., Ayurveda. The treatment of PS is typically multimodal, it consists of the nonsteroidal anti-inflammatory drugs (NSAIDs), muscle relaxants, and neuropathic pain medications, such as gabapentin or pregabalin. From an Ayurvedic point of view the clinical picture of Piriformis Pain syndrome shows substantial resemblance with Gridhrasi, a Vata-dominant Vatavyadhi characterized by radiating pain, stiffness and functional limitation in the lower limb, which provides a conceptual framework for traditional interventions such as Marma Chikitsa. Marma Chikitsa, by precise stimulation and modulation of specific Marma sthans, has been reported to exert analgesic, anti-inflammatory and neuro-modulatory effects through mechanisms that include inhibition of pro-inflammatory cytokines, activation of endogenous opioid pathways and modulation of descending pain processing, thereby offering a rational integrative approach.^[7]

This article presents a clinical case of Piriformis Pain syndrome in a 56-year-old woman focusing on the role of Marma chikitsa in managing refractory symptoms like pain in Piriformis Pain syndrome.

CASE PRESENTATION

A 56-year-old woman, with no significant history of fall, presented to Marma chikitsa opd with a 7 month history of lower back pain and left buttock pain. exacerbated by supine and sitting positions, and relieved by standing and walking. The patient also reported paresthesia extending from the posterior aspect of the knee to the sole of the left foot, primarily occurring

while seated. Previous treatment attempts, including intramuscular injections and physiotherapy, had not provided significant relief.

Personal history

1. Appetite - Normal
2. Bowel - Clear
3. Sleep - Sound
4. Micturition – Normal

General Examination of patient

1. Weight – 65 kg
2. Height – 5 feet 4inch
3. Heart rate - 78/min
4. Respiration rate - 18/min
5. Blood pressure - 120/90 mm Hg

On Examination

Inspection - No swelling, erythema, or visible deformity. No apparent asymmetry of the dorsolumbar region.

Palpation Tenderness was elicited over the left piriformis region. No tenderness was present over the greater trochanter.

SLR Test - Left leg 35° (grade 3), Right leg 90°

FAIR test (flexion, adduction, and internal rotation), were positive

Lasègue and Bragard tests- on the left side reproduced the pain described by the patient, suggesting possible sciatic neuropathy.

Pain - Pain intensity was assessed using a 0–10 Numerical Rating Scale (NRS).

Stiffness - Daily for 10-30 minutes (grade 2)

Based on the clinical history, physical examination, positive FAIR test, localized tenderness over the piriformis muscle, radiating symptoms along the sciatic nerve distribution, and MRI findings demonstrating enlargement of the left piriformis muscle without another structural cause, a clinical diagnosis of piriformis syndrome was made.

TREATMENT PROTOCOL

The treatment protocol utilized Marma Chikitsa, targeting nine specific Marma points of the lower limb and pelvic region, Talhridaya, Kshipra, Gulpha, Indrabasti, Ani, Urvi, Nitamb, Katiktaran, and Kukundar. Each point received approximately 15–18 stimulations per session via thumb pulp application. The study lasted 14 days, with follow-up on the 7th day.^[8]

S.no	Marma sthan	Stimulation Time	Frequency	Duration
1	Talhridaya Marma	0.8 sec	15-18 Times	Once a day
2	Kshipra Marma	0.8 sec	15-18 Times	Once a day
3	Gulpha Marma	0.8 sec	15-18 Times	Once a day
4	Indrabasti Marma	0.8 sec	15-18 Times	Once a day
5	Ani Marma	0.8 sec	15-18 Times	Once a day
6	Janu Marma	0.8 sec	15-18 Times	Once a day
7	Nitamb Marma	0.8 sec	15-18 Times	Once a day
8	Katiktaran Marma	0.8 sec	15-18 Times	Once a day
9	Kukundar Marma	0.8 sec	15-18 Times	Once a day

- A steady and moderate pressure were applied slowly and gently.
- Pressure was applied incrementally based on the patient's tolerance and strength.



Figure No. 1 Talhridaya Marma.

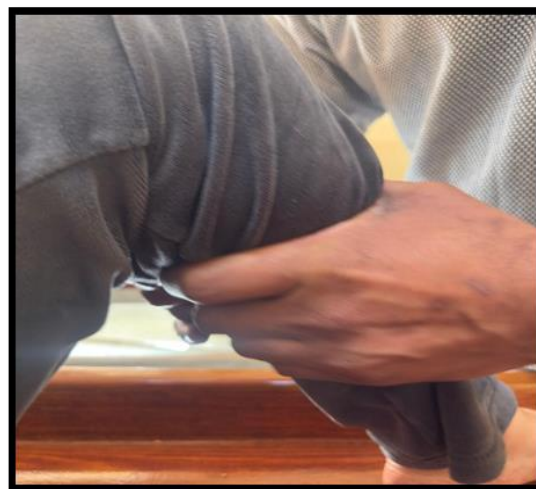


Figure No. 2 Indrabasti Marma.



Figure No. 3 Janu Marma.



Figure No. 4 Nitamb Marma.



Figure No. 5 Katiktaran Marma.



Figure No. 6 Kukundar Marma.

ASSESSMENT CRITERIA

Treatment efficacy was evaluated using both subjective and objective disease parameters, recorded pre- and post-treatment. These parameters were assessed via a standardized grading system.

1. PAIN

Pain	Grade
No Pain	0
Mild pain but no difficulty in walking	1
Moderate pain and slight difficulty in walking	2
Severe pain with severe difficulty in walking	3

2. STIFFNESS

Stiffness	Grade
No stiffness	0
Occasionally, for 5-10 minutes	1
Daily for 10-30 minutes	2
Daily for 30-60 minutes more than 1 hrs.	3

3. STRAIGHT LEG RAISING TEST (SLRT)

SLR Test Angle	Grade
> 90°	0
71-90°	1
51-70°	2
≤50°	3

OBSERVATIONS

After treatment, the patient reported significant alleviation of pain, stiffness, and muscle spasms, leading to less overall discomfort. She noted enhanced ease in standing, walking, and carrying out routine tasks.

Diagnostic criteria	Before treatment	After treatment	Improvement
Pain	3	1	66.67%
Stiffness	2	0	100%
SLRT	35°	80°	128.57% in SLRT angle

DISCUSSION

The piriformis muscle plays a crucial role in stabilizing the hip during gait and rotation of the femur, but when this muscle becomes tight or undergoes spasm, it can compress the sciatic nerve, leading to a spectrum of symptoms ranging from localized buttock pain to radiating pain down the leg. This condition is particularly challenging to diagnose because its symptoms overlap significantly with other conditions, such as lumbar radiculopathy, sacroiliac joint dysfunction, and gluteal tendinopathy. Anatomical variations in the relationship between the sciatic nerve and the piriformis muscle are common, with up to 22% of the population presenting some form of deviation from the classic anatomical description. These variations, such as a split piriformis muscle or a nerve piercing through the muscle, can predispose individuals to PS.^[9] Despite these anatomical considerations, the exact pathophysiological mechanisms behind Piriformis Pain syndrome are still not fully understood. The muscle may compress the nerve due to hypertrophy, spasms, or changes in muscle tension, but the precise cause remains elusive in many cases.^[10]

This case study highlights the effectiveness of Marma Chikitsa, which yielded substantial gains in both patient-reported outcomes and measurable clinical indicators, underscoring its value for treating Piriformis Pain syndrome.

The protocol targeted eight key Marma sthans - Kshipra, Talhridaya, Gulpha, Indrabasti, Ani, Janu, Nitamb, Katiktaran, and Kukundar Marma located in the lower extremities, pelvis, and lumbosacral region. These sites play vital roles in neuromuscular function, blood flow, and pain processing. Traditional Ayurvedic literature identifies them as critical areas where disruption can trigger pain, rigidity, and impaired movements. The patient's pain intensity dropped markedly (from grade 3 to grade 1), likely due to the neuromodulating action of Marma stimulation. Applying gentle, rhythmic pressure to these points activates peripheral nerves, boosts regional circulation, eases muscle tension, and activates natural pain-relief pathways, akin to those in acupressure and reflexology. Relief from stiffness, and muscle tension points to diminished nerve irritation. Clinically, enhancements in the Straight Leg Raising Test (SLRT) range confirm the therapy's functional advantages. Improvement in SLRT may reflect reduced neural mechano-sensitivity and improved tolerance to straight-leg elevation. These results echo prior research on Marma therapy's benefits for musculoskeletal and neurological issues, such as low back pain and cervical spondylosis. Broader evidence affirms Marma Chikitsa efficacy in these conditions by activating nerve terminals, enhancing blood supply, and restoring tissue balance, leading to pain relief and better mobility. No adverse events were reported or observed during the treatment period in this case. In contrast to prolonged drug therapies that risk gastrointestinal, kidney, or heart issues, Marma Chikitsa provides a secure, affordable, and patient friendly option. It holds special promise for chronic Piriformis Pain syndrome cases where standard interventions offer only short-lived benefits.

CONCLUSION

In this case, Marma Chikitsa was associated with improvement in pain, stiffness, and straight leg raising. This case suggests that Marma Chikitsa may have potential as a non-invasive adjunctive approach for symptom management in piriformis syndrome. However, controlled clinical studies with larger sample sizes are required to establish its efficacy and safety.

REFERENCES

1. Jankovic D, Peng P, van Zundert A: Brief review: piriformis syndrome: Etiology, diagnosis, and management. *Can J Anesth*, 2013; 60: 1003-12.
2. Probst D, Stout A, Hunt D. Piriformis Syndrome: A Narrative Review of the Anatomy, Diagnosis, and Treatment. *PM R.*, 2019; 11(Suppl 1): S54-S63. doi:10.1002/pmrj.12189.
3. Hopayian K, Danielyan A. Four symptoms define the piriformis syndrome: an updated systematic review of its clinical features. *Eur J Orthop Surg Traumatol*, 2018; 28(2): 155-164. doi:10.1007/s00590-017-2031-8.
4. Dey S, Das S, Bhattacharyya P. Piriformis syndrome: a clinical review. *Journal of Evolution of Medical and Dental Sciences*, 2013 Apr 15; 2(15): 2502-9.
5. Kean Chen C, Nizar AJ. Prevalence of piriformis syndrome in chronic low back pain patients. A clinical diagnosis with the modified FAIR test. *Pain Practice*, 2013 Apr; 13(4): 276-81.
6. Fishman LM, Dombi GW, Michaelsen C, Ringel S, Rozbruch J, Rosner B, Weber C. Piriformis syndrome: diagnosis, treatment, and outcome—a 10-year study. *Archives of physical medicine and rehabilitation*, 2002 Mar 1; 83(3): 295-301.
7. Chaudhari P, Marwaha R, Bhalerao N. Marma Therapy – A Healing Touch for Pain with Gate Control Theory and Neuromodulation Technique. *AYUSHDHARA*, 2024; 11(6): 179–183. doi:10.47070/ayushdhara.v11i6.1782.
8. Joshi SK. *Marma Science and Principles of Marma Therapy*. 1st ed. Delhi: Vani Publications, 2010; 46.
9. Windisch G, Braun EM, Anderhuber F: Piriformis muscle: Clinical anatomy and consideration of the piriformis syndrome. *Surg Radiol Anat*, 2007; 29: 37-45. 10.1007/s00276-006-0169-x
10. Natsis K, Totlis T, Konstantinidis GA, Paraskevas G, Piagkou M, Koebke J: Anatomical variations between the sciatic nerve and the piriformis muscle: A contribution to surgical anatomy in piriformis syndrome. *Surg Radiol Anat*, 2014; 36: 273-80. 10.1007/s00276-013-1180.