

**CLINICAL ASSESSMENT OF MARMA CHIKITSA IN THE MANAGEMENT OF PAIN
ASSOCIATED WITH KNEE OSTEOARTHRITIS – A PILOT STUDY****Dr. Suryanath Yogi^{1*}, Dr. Rita Marwaha², Dr. Pankaj Gupta³, Dr. Nisha Bhalerao⁴, Dr. Shiba Datta Panda⁵**¹M.D. Scholar Final year, 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.³Professor I/C, 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.⁵Lecturer, PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.) Ayurveda College and Institute Bhopal (M.P.) India.***Corresponding Author: Dr. Suryanath Yogi**M.D. Scholar Final Year, PG Department of Rachna Sharir, Pt. Khushilal Sharma Govt. (Auto.) Ayurveda College and Institute Bhopal (M.P.) India. DOI: <https://doi.org/10.5281/zenodo.23829554>**How to cite this Article:** Dr. Suryanath Yogi^{1*}, Dr. Rita Marwaha², Dr. Pankaj Gupta³, Dr. Nisha Bhalerao⁴, Dr. Shiba Datta Panda⁵ (2026). Clinical Assessment Of Marma Chikitsa In The Management Of Pain Associated With Knee Osteoarthritis - A Pilot Study. World Journal of Pharmaceutical and Medical Research, 12(11), 328–332.

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ABSTRACT

Introduction: Knee osteoarthritis (KOA) is a frequently encountered degenerative musculoskeletal condition that may present with pain, stiffness, limited joint mobility, and difficulty in carrying out routine activities. From an Ayurvedic perspective, its clinical features can be considered in relation to *Sandhigata Vata*, in which aggravated *Vata Dosha* affects the joints. *Marma Chikitsa* is a traditional Ayurvedic therapeutic modality involving stimulation of specific *Marma* sites and may provide symptomatic relief while supporting functional improvement. The present study was undertaken to evaluate the effect of *Marma Chikitsa* on pain and functional status in patients with knee osteoarthritis. **Materials and Methods:** An open-label clinical study was carried out in 10 patients diagnosed with knee osteoarthritis who fulfilled the specified inclusion and exclusion criteria. Selected *Marma* points of the knee and lower limb were stimulated according to a standardized therapeutic protocol for a defined treatment period. Clinical assessment was performed before and after the intervention. Pain, stiffness, and functional ability were evaluated using predefined clinical parameters and appropriate outcome measures. The collected data were subjected to statistical analysis to determine the changes following treatment. **Results:** Following completion of the treatment, improvement was noted in the overall clinical status of the participants. Decreased pain and stiffness, along with improvement in mobility and functional performance, were observed in comparison with the baseline findings. The results indicated a favourable symptomatic response to *Marma Chikitsa* among the study participants. **Discussion and Conclusion:** The beneficial changes observed may be related to the stimulation of selected *Marma* sites, which could modulate pain perception and neuromuscular responses, thereby supporting improved movement and functional capacity. *Marma Chikitsa* may therefore have potential as a non-invasive therapeutic option for symptomatic management of knee osteoarthritis. However, confirmation of these findings requires further well-designed studies involving larger sample sizes, appropriate control groups, and extended follow-up.

KEYWORDS: *Marma Chikitsa*, Knee Osteoarthritis, *Sandhigata Vata*, Pain, Functional Status, *Ayurveda*.**INTRODUCTION**

Osteoarthritis (OA) is a common chronic musculoskeletal disorder affecting the whole joint and is characterized by pain, stiffness, swelling, and limitation

of movement. The knee is the most frequently affected joint, and the resulting pain and functional restriction can interfere with mobility, daily activities, and quality of life. According to the World Health Organization,

approximately 528 million people worldwide were living with osteoarthritis in 2019, with the knee being the most commonly affected joint.^[1]

Knee osteoarthritis is a multifactorial condition associated with increasing age, previous joint injury, repetitive mechanical stress, obesity, and other metabolic and genetic factors.^[1] Management generally includes exercise and rehabilitation, weight management, pharmacological measures for pain relief, and surgical intervention in advanced cases.^[1] Despite the availability of these approaches, persistent pain and functional limitation remain important clinical concerns, creating a need to explore additional non-invasive therapeutic approaches.

In Ayurveda, the clinical presentation of knee osteoarthritis is commonly correlated with *Janu Sandhigata Vata*, a manifestation of *Vatavyadhi*. Classical features such as *Sandhishoola* (joint pain), *Sandhigraha* (stiffness), *Sandhishopha* (swelling), and difficulty in joint movement show clinical similarity with important manifestations of knee osteoarthritis.^[2,3] Ayurvedic literature describes *Vata* as an important factor in the development of degenerative conditions, particularly with advancing age and *Dhatukshaya*. Several Ayurvedic treatment modalities have consequently been investigated for the management of *Janu Sandhigata Vata*.^[2,3]

Marma Chikitsa is an Ayurvedic therapeutic approach based on stimulation of specific *Marma* sites. *Marmas* are traditionally regarded as vital anatomical points associated with important structural and functional components of the body. Their therapeutic stimulation has been explored in relation to pain and musculoskeletal dysfunction. Recent clinical research has also begun investigating *Marma* therapy in painful musculoskeletal conditions, although evidence remains limited and further controlled clinical evaluation is required.^[4]

Considering the clinical importance of knee osteoarthritis, the need for effective non-invasive approaches, and the limited clinical evidence regarding the application of *Marma Chikitsa* in this condition, the present pilot study was undertaken to assess its effect on pain and functional status in patients with knee osteoarthritis.

AIM AND OBJECTIVES

AIM

To clinically assess the effect of *Marma Chikitsa* in the management of pain associated with knee osteoarthritis.

OBJECTIVES

1. To assess the severity of knee pain before and after administration of *Marma Chikitsa*.
2. To evaluate the effect of *Marma Chikitsa* on stiffness and functional status of the knee joint.

3. To assess the overall clinical response of patients following *Marma Chikitsa*.
4. To observe the safety and tolerability of *Marma Chikitsa* during the study period.

MATERIALS AND METHODS

Study Design

The present study was designed as a **pilot clinical study** to evaluate the efficacy of *Marma Chikitsa* in patients clinically diagnosed with knee osteoarthritis.

Sample Size

A total of 10 patients fulfilling the predefined inclusion criteria were selected for the study.

Study Setting

The patients were selected and treated at Pt. Khushilal Sharma Government Ayurveda College and Institute, Bhopal, Madhya Pradesh.

Study Procedure

Patients fulfilling the selection criteria were enrolled after obtaining informed consent. A detailed clinical history and examination were performed before initiation of treatment. Baseline assessment was carried out using subjective and objective parameters. Selected *Marma Sthanas* were then stimulated according to the predetermined treatment protocol. Post-treatment assessment was performed using the same parameters to evaluate clinical improvement.

INCLUSION CRITERIA

1. The patients between the age 30 years to 60 years
2. Sex-Either sex.
3. Patients with Primary Osteoarthritis of knee (single or both)
4. Patients of GRADE 1 and GRADE 2

EXCLUSION CRITERIA

1. Patients with skin allergies/skin diseases
2. Patients with Pott's spine/infections/other systemic diseases.
3. Patients with systemic conditions such as gouty arthritis, rheumatoid arthritis, psoriatic arthritis.
4. Patients with diabetes/hypertension.
5. Patients using local anti-inflammatory medicine other than the research drugs.
6. Low backache with or without radiation to legs.
7. Patients with metallic implants.
8. Subjects having any deformity of hip or back.
9. History of bony or soft tissue injury to knee joint.

ASSESSMENT CRITERIA

Subjective and objective parameters were assessed and result were tabulated and subjected for statistical analysis.

➤ PAIN

Table no. 1: Showing the grading of Pain (*Ruka*).

<i>Ruka</i> (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

➤ STIFFNESS

Table no. 2: Showing the grading of Stiffness (*Stambha*).

<i>Stambha</i> (Stiffness)	Grade
No stiffness	0
Sometime for 5-10 minutes	1
Daily for 10-30 minutes	2
Daily for 30-60 minutes more than 1 hrs.	3

➤ SWELLING

Table no. 3: Showing the grading of Swelling (*Shotha*).

Parameters	Grade
No swelling	0
Slightly obvious	1
Covers well over the bony prominence	2
Marked and much elevated	3
Severe and very much elevated	4

➤ RESTRICTION OF MOVEMENT

Table no. 4: Showing the grading of restriction of movement (*Akunchan Prasaranjanyo Vedna*).

Parameters	Grade
No pain	0
Pain without winching of face	1
Pain with winching of face	2
Prevent complete flexion	3
Does not allow passive movement	4

OVERALL ASSESSMENT CRITERIA

Table no. 5: The overall assessment of *Marma Chikitsa* will be based on symptom improvement.

1.	Cured	100% improvement in symptoms and no recurrence during follow-up.
2.	Marked Improvement	- >75 - <100%
3.	Moderate Improvement	>50 - ≤75%
4.	Mild Improvement	- >25 - ≤50%
5.	No Improvement	≤25%

TREATMENT PROTOCOL

The *Marma chikitsa* was performed in which following *Marmas* were stimulated. (*khipra, gulpha, indrabasti Marma*) According to their anatomical location of *Marma sthana*, every *Marma sthana* has stimulated by pulp of thumb for 15-18 times on an average in single sitting, once a day.^[5]

- A steady and moderate pressure will be applied by pulp of thumb slowly and gently.
- Pressure will be increased gradually depending upon patient strength.

➤ SOME MARMA STHANAS STIMULATION

1. KSHIPRA MARMA
2. GULPHA MARMA
3. INDRABASTI MARMA
4. JANU MARMA

1



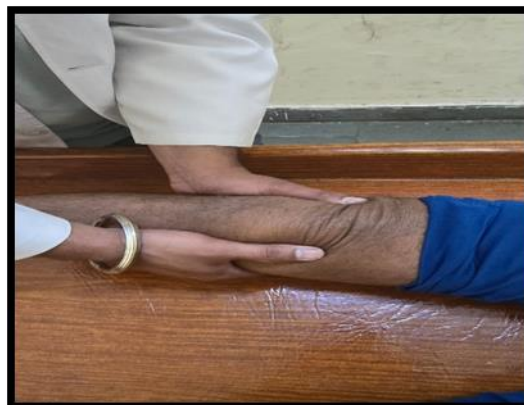
2



3



4



OBSERVATION AND RESULT

In the present study, all participants (100%) belonged to the Hindu community, while 80% of the patients were within the age group of 30–50 years. Approximately 60% of the participants belonged to the middle socioeconomic class. Bilateral and right-sided knee involvement was observed in 50% of the patients. All participants had a disease duration of less than one year. No significant complications or adverse effects were reported during the study period.

The findings indicate that Marma Chikitsa was effective in reducing the signs and symptoms associated with knee osteoarthritis. A significant improvement in OA-related

symptoms was observed following the intervention and was maintained during the follow-up period, as presented in the subsequent table. Among the 10 patients included in the study, 5 patients experienced marked relief, 4 patients showed moderate relief, and 1 patient demonstrated mild relief following Marma Chikitsa.

Statistical Analysis

The observations were made both before and after therapy to evaluate progress in symptomatic relief and to statistically analyse it. The recorded data were used to determine the mean, mean difference, SD, SE, and the Wilcoxon signed-rank test.

Table 6: Statistical analysis of 10 patients subjected for Marma chikitsa (Before treatment and on 21 days after receiving Marma chikitsa).

Sr. No.	SYMPTOMS	MEAN		MEAN DEFF.	% RELEIF	SD	SE	P VALUE	W VALUE	REMARK
		BT	AT							
1	PAIN	2.100	0.4000	1.700	80.95 %	0.8233	0.2603	0.0039	45	VS
2	STIFFNESS	1.800	0.6000	1.200	66.66%	0.6325	0.2000	0.0039	45	VS
3	SWELLING	1.700	0.6000	1.100	64.70%	0.5676	0.1795	0.0039	45	VS
4	RESTRICTION OF MOVEMENT	1.500	0.7000	1.100	53.33%	0.4215	0.1333	0.0078	36	VS

Table 7: Overall effect of therapy before Marma chikitsa and after completion of Marma chikitsa.

	Criteria	No. of patients
Cured	100%	0
Marked improvement	>75%-<100%	4
Moderate improvement	>50%-<75%	5
Mild improvement	>25%-<50%	1
No improvement	<25%	0

DISCUSSION

The present pilot clinical study was undertaken to assess the effect of *Marma Chikitsa* in the management of pain associated with knee osteoarthritis. Knee osteoarthritis is commonly associated with pain, stiffness, swelling and restriction of movement, which may adversely affect mobility and daily activities.^[1] In Ayurveda, the clinical presentation of knee osteoarthritis can be correlated with *Janu Sandhigata Vata*, where manifestations such as *Sandhishoola*, *Sandhigraha*, *Sandhishopha* and restricted

joint movement show clinical similarity with the symptoms of knee osteoarthritis.^[6,7]

In the present study, *Marma Chikitsa* was administered by stimulating selected *Marma Sthanas*, namely *Kshipra*, *Gulpha*, *Indrabasti* and *Janu Marma*, using gentle to moderate pressure with the pulp of the thumb according to the predetermined protocol. The selection of these sites may be considered relevant because they are situated in relation to the lower limb and knee region and may have a therapeutic role in musculoskeletal disorders.

Clinical research on Marma-based interventions has also explored their application in pain and musculoskeletal conditions, although the available evidence remains limited.^[8,9]

A notable improvement was observed in pain following treatment. The mean pain score decreased from 2.10 before treatment to 0.40 after treatment, corresponding to 80.95% relief, with a statistically significant P value of 0.0039. This indicates that pain was the most responsive clinical parameter in the present study. The reduction in pain may be related to stimulation of sensory structures at the selected Marma sites and consequent modulation of pain perception. However, the exact mechanism cannot be established from the present pilot study.

Stiffness also showed improvement, with the mean score decreasing from 1.80 to 0.60, giving 66.66% relief with $P = 0.0039$. Improvement in stiffness may have contributed to better joint mobility and ease of movement. From an Ayurvedic perspective, reduction in *Stambha* may be understood in relation to improvement in the functional disturbance of *Vata* associated with *Sandhigata Vata*.

Similarly, swelling decreased from a mean score of 1.70 to 0.60, showing 64.70% relief with $P = 0.0039$. Restriction of movement also improved after treatment, with the mean score changing from 1.50 to 0.70, with 53.33% reported relief and $P = 0.0078$. These findings suggest improvement across the major clinical manifestations assessed in the study.

Regarding the overall clinical response, 4 patients showed marked improvement, 5 patients showed moderate improvement, and 1 patient showed mild improvement, while no patient was categorized as cured or as having no improvement. Thus, all participants demonstrated some degree of symptomatic improvement according to the study's predefined assessment criteria.

The observed findings are in accordance with the general concept that stimulation-based non-pharmacological interventions may have a role in symptomatic management of musculoskeletal pain. Previous clinical research has investigated Ayurvedic parasurgical procedures, including Marma-related approaches, in patients with different musculoskeletal pain conditions and reported the need for further controlled clinical evaluation.^[8] More recent research has also highlighted that rigorous randomized studies are still required to establish the efficacy and safety of Marma chikitsa.^[9]

No significant complications or adverse effects were reported during the study period. This suggests that the procedure was well tolerated in the selected participants; however, safety conclusions should remain cautious because of the small sample size.

Overall, the present pilot study demonstrated improvement in pain, stiffness, swelling and restriction of movement following *Marma Chikitsa*. The findings indicate a possible beneficial role of Marma stimulation in the symptomatic management of knee osteoarthritis. Nevertheless, the study involved only 10 participants and did not include a control group. Therefore, the results should be considered preliminary. Larger randomized controlled studies with standardized outcome measures, appropriate comparison groups and longer follow-up are required to establish the clinical efficacy and mechanisms of *Marma Chikitsa* in knee osteoarthritis.

CONCLUSION

Marma Chikitsa resulted in significant improvement in pain, stiffness, swelling, and restriction of knee movement among patients with knee osteoarthritis. Overall, 90% of the participants demonstrated moderate to marked clinical improvement, with no significant adverse effects reported. These findings suggest that Marma Chikitsa may serve as a safe, simple, non-invasive, and potentially cost-effective approach for the symptomatic management of knee osteoarthritis.

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