

EVALUATION OF AGNIKARMA AND MARMA CHIKITSA AS AYURVEDIC INTERVENTIONS IN CERVICAL SPONDYLOSIS: A COMPARATIVE STUDY

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ABSTRACT

In today's fast-paced lifestyle, prolonged sitting, reduced physical activity, and poor postural habits have become increasingly common across different age groups. These lifestyle changes have contributed to a growing incidence of musculoskeletal problems, including cervical spondylosis. From an Ayurvedic perspective, the clinical features of cervical spondylosis can be correlated with *Manyastambha*, which is primarily characterised by pain, stiffness, and restricted movement in the neck region.^[1] Classical Ayurvedic texts offer several therapeutic approaches for managing such conditions, among which *Agnikarma* and *Marma Chikitsa* are particularly noteworthy. Both therapies have shown promising results in relieving symptoms; however, their comparative effectiveness may help determine which approach provides faster and more lasting relief. This study explores the role of these traditional

Ayurvedic therapies in managing lifestyle-related cervical disorders and highlights their potential relevance in today's increasingly sedentary lifestyle.

KEYWORDS: Manyastambha, cervical spondylosis, agnikarma, marma Chikitsa, Ayurveda, neck Pain, sedentary Lifestyle, postural disorders, Ayurvedic therapy and musculoskeletal disorders.

Ayurveda, the ancient science of life, views health as a state of balance among the *Dosha*, *Dhatu*, and *Mala*. Rather than focusing only on the treatment of disease, Ayurveda also gives importance to maintaining health through healthy daily routines (*Dinacharya*) and seasonal practices (*Ritucharya*).^[2] In today's rapidly changing lifestyle, however, urbanisation, prolonged sitting, reduced physical activity, and poor posture have become increasingly common. These changes have contributed to a growing number of lifestyle-related health problems, particularly musculoskeletal disorders.

The concept of *Manyastambha* is well described in the classical Ayurvedic literature. *Charaka Samhita* mentions *Manyastambha* among the *Nanatmaja Vata Vyadhi*, indicating the predominant role of *Vata Dosha* in its development.^[3] According to Acharya Charaka - “□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □” — the aggravated Vāta produces stambha (stiffness) in the Manyā region.^[4] Similarly, *Sushruta Samhita*.^[5] and *Ashtanga Hridaya*^[6] discuss disorders of the neck region and describe features such as stiffness, pain, and restricted movements. These classical descriptions show that *Manyastambha* has long been recognised in Ayurveda, with established concepts regarding its causes, pathogenesis, clinical presentation, and management.

Ayurveda offers a wide range of therapeutic modalities for the management of Manyastambha, aiming to pacify Vata Dosha and relieve symptoms. Among these, *Agnikarma* (therapeutic cauterisation) and *Marma Chikitsa* (therapy involving vital energy points) are considered highly effective. Acharya Sushruta has given special importance to Agnikarma in painful musculoskeletal conditions, stating that diseases treated with Agnikarma have minimal chances of recurrence. On the other hand, Marma Chikitsa works by regulating the flow of *Prana* and relieving muscular stiffness and pain.

Considering the rising prevalence of cervical disorders in the modern population and the growing need for safe and effective therapeutic options, it is important to explore and evaluate traditional treatment approaches. Therefore, the present study was undertaken to compare the efficacy of *Agnikarma* and *Marma Chikitsa* in the management of *Manyastambha*.

BASIS OF THE RESEARCH

Cervical spondylosis has become increasingly common in the present population. Changes in lifestyle, prolonged sitting, poor posture, and excessive use of electronic devices are important contributing factors.^[7] Although cervical spondylosis is generally not life-threatening, persistent symptoms can significantly affect a person's daily activities and quality of life. Pain, stiffness, restricted neck movements, and difficulty in performing routine or occupational activities are commonly experienced by patients.

The management of cervical spondylosis in modern medicine primarily aims to reduce symptoms and improve function. Conservative measures such as rest, cervical support, analgesics, non-steroidal anti-inflammatory drugs (NSAIDs), and physiotherapy are commonly used. Although these approaches can provide relief, the benefits may sometimes be temporary, and prolonged use of certain medications may be associated with adverse effects. This creates a need to explore therapeutic approaches that are safe, effective, and capable of providing more sustained relief.

including gastrointestinal disturbances, dependency, and decreased patient compliance. Surgical interventions, although beneficial in severe cases, are expensive, not easily accessible to all, and may lead to complications such as recurrence, nerve damage, and functional disability.

Therefore, a quest for search of different alternative methods in the management of cervical spondylosis is the need of the hour.

AIM

To evaluate and compare the therapeutic effectiveness of *Agnikarma* using *Panchadhatu Shalaka* and *Marma Chikitsa* in the management of *Manyastambha* (cervical spondylosis).

OBJECTIVES

- To evaluate the clinical efficacy of **Agnikarma with Panchadhatu Shalaka** in relieving the symptoms of Manyastambha.
- To evaluate the therapeutic effect of **Marma Chikitsa** in the management of Manyastambha.
- To compare the outcomes of Agnikarma and Marma Chikitsa with respect to pain relief, stiffness, and improvement in neck mobility.
- This study aims to assess the safety, cost-effectiveness, and patient acceptability of both treatment modalities.

CLINICAL SOURCE

Daily OPD- and IPD-based patients diagnosed with manyastambha will be considered for the study after obtaining written informed consent.

Literary Source

Ayurvedic samhitas and medical textbooks related to surgery, articles, journals, and research papers, etc., will be screened for information regarding the subject.

Experimental Source

This is a human clinical trial, and no animal experimentation will be conducted.

Materials Required

- Panchadhatu Shalaka^[8] (Bindu-shaped)
- Surgical gloves
- Surgical gown, cap, and mask
- Kidney tray
- Distilled water
- Burner (for heating Shalaka)
- Aloe vera pulp (for post-procedure soothing)
- Turmeric powder (for wound care)
- Goniometer (for assessment of range of motion)

METHODOLOGY

A total of 30 patients with manyastambh will be included in the study. The sampling method will be simple random sampling using the closed envelope method. The patients will be randomly distributed into 2 groups, namely Group A & Group B.

GROUP	NUMBER OF PATIENTS	TYPE OF TREATMENT	DURATION
A	15	AGNIKARAM WITH PANCHDHATU SHALAKA	21 DAYS
B	15	MARMA CHIKITSA	21 DAYS

Group A Procedure (Agnikarma)

Agnikarma is performed in three stages, as described under *Trividha Karma*.

- **Poorva Karma** – Pre-operative procedures
- **Pradhana Karma** – Operative procedure
- **Paschat Karma** – Post-operative procedures

Poorva Karma (Pre-operative Procedure)

- Written informed consent was obtained from each patient, as it is an essential requirement before any surgical or para-surgical intervention.
- The patient was made to sit comfortably on a chair with the head slightly flexed forward and supported on a table.
- Baseline assessment of cervical movements was performed using a goniometer.
- Preparation of the local area: The cervical region was cleaned with distilled water and gently dried using a sterile gauze piece to maintain aseptic conditions.
- The most tender points were identified and marked using a marker, maintaining a minimum distance of approximately 2 cm between each point to prevent the overlapping of burn sites during the procedure.
- The Panchadhatu Shalaka was heated over a burner until it became red hot, ensuring the proper temperature for the procedure.

Pradhana Karma (Main Procedure)

- The Panchadhatu Shalaka, heated until it becomes uniformly red hot, is gently applied in a *Bindu* (dot-like) manner over the previously marked tender points in the cervical region.
- The heated Shalaka is briefly applied to each site to produce the desired therapeutic burn. Once the features of **Samyak Twak Dagdha Lakshana**^[8] are observed, the instrument is lifted from that point.
- The same procedure was sequentially repeated over all the marked areas of maximum pain and tenderness to ensure controlled and precise application.

Paschat Karma (Post-procedural Care)

- Immediately following the procedure, fresh Aloe vera pulp was applied over the treated sites to soothe the area, minimise burning sensation, and reduce the chances of scar formation.
- The patient was advised to follow dietary restrictions and avoid food items that may aggravate the Vata and Kapha Dosha.^[9]
- Agnikarma is performed in multiple sittings, typically scheduled on Day 0, Day 7, Day 14, and Day 21 for optimal therapeutic effect.

FOLLOW UP

For post- treatment observation in three seats.

Patient will be called once after a week, i.e day 7, day 14 and day 21.

GROUP B PROCEDURE

During marmachikitsa, the following marma points of the upper limb, neck and back region will be stimulated.^[10]

MARMA POINTS OF HAND

1. Kshipra
2. Talhridya
3. Kurcha
4. Kurchashira
5. Urvi
6. Manibandha
7. Indrabasti
8. Kurpar
9. Ani

MARMA OF NECK

10. Krikatika

MARMA OF BACK

11. ansa
12. ansa phalaka
13. Brahti

INCLUSION CRITERIA

- 30 patients will be selected having signs & symptoms of Manyastambh
- Patients of either sex
- Patients in the age group of 21-80 years
- Willingness of patients.

EXCLUSION CRITERIA

- Patients below 21 years of age and above 80 years of age.
- Patients with
 - ❖ Neo Plastic Case
 - ❖ Recent Accidental Case of less than one year
 - ❖ Infective Pathology – meningitis
 - ❖ Neurological complications
 - ❖ Rheumatoid arthritis
 - ❖ Uncontrolled hypertension, diabetes mellitus, cardiac disorders, or severe anaemia.
 - ❖ Non-cooperative patients.
 - ❖ Pregnant patients are contraindicated for Agnikarma.
 - ❖ Ankylosing Spondylosis
 - ❖ Autoimmune disorders involving the musculoskeletal system
 - ❖ Local skin disorder

Assessment Criteria

- ❖ Ruja (Pain)
- ❖ Gatisanga (Restriction of Movement/Stiffness)

OBJECTIVE ASSESSMENT CRITERIA

- ❖ Range of Motion (ROM)

Criteria for Withdrawal from the Study

Participants will be withdrawn from the study under the following circumstances:

- Voluntary withdrawal of consent by the participant at any stage of the study. Such participants will be replaced to maintain the required sample size of the study.
- The development of any acute illness, adverse event, or complication during the study period that necessitated appropriate medical management and made continued participation unsuitable.

- Noncompliance with the study protocol or inability to attend scheduled follow-up assessments, if applicable.

Diet and Lifestyle Recommendations

Participants will be advised to follow a Vata-Kapha- pacifying diet and lifestyle regimen (ahara and vihara) throughout the study period, as per Ayurvedic principles.

Study Design

This study will be conducted as a randomised, open-label, interventional clinical trial.

Statistical Analysis

Data obtained from clinical observations and assessments will be analysed using appropriate statistical techniques. Statistical evaluation will be performed in consultation with a qualified statistician, and conclusions will be drawn based on the results.

Outcome Assessment Criteria

The therapeutic efficacy of the intervention will be evaluated by assessing changes in the severity of the following clinical parameters.

- Neck pain (Ruja)
- Neck stiffness (Stambha)
- Restriction of cervical movements (Gatisanga)

Both subjective and objective parameters will be recorded at predefined intervals and compared with baseline values to determine the extent of clinical improvement.

Pain Assessment

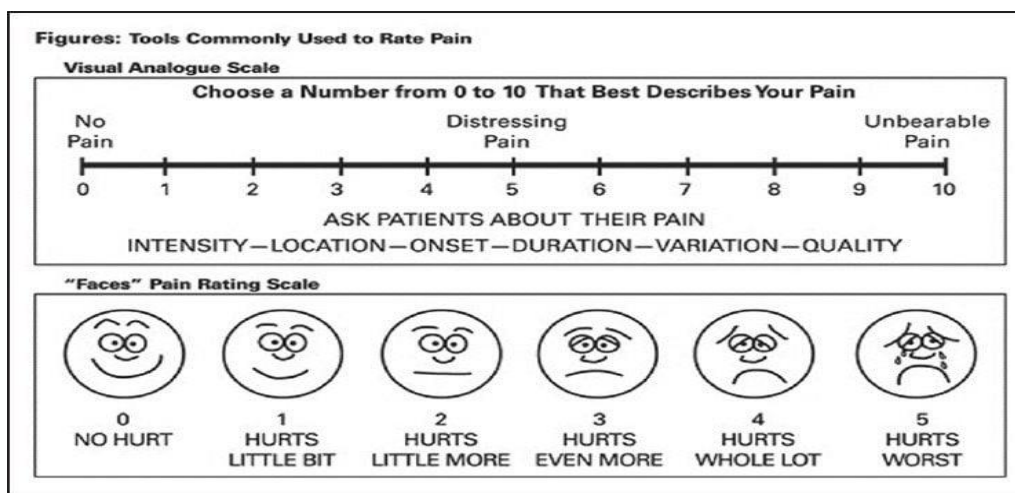
The intensity of pain will be measured using the **Visual Analogue Scale (VAS)**, and the degree of improvement will be determined by comparing the pre-treatment and post-treatment scores.

A) Subjective Parameters

1. Neck pain

Neck Pain	Grades	Before treatment (n=15)	After treatment (agni karam chikitsa) (n=15)	After treatment (marma chikitsa) (n=15)
No neck pain(0)	0	0	9	5
Neck pain aggravates with movement (1-3)	1	3	4	5

Neck pain without movement (4-6)	2	6	2	3
Neck pain that disturbs sleep (7-8)	3	4	0	1
Continuous pain (9-10)	4	2	0	1
total		15	15	15



2. Stiffness

Neck Stiffness	Grades	Before treatment (n=15)	After treatment (agnikaram chikitsa) (n=15)	After treatment (marma chikitsa) (n=15)
No Stiffness	0	0	10	6
Morning Stiffness	1	3	3	4
Later-hours stiffness on the same day	2	6	2	3
Stiffness that disturbs sleep	3	4	0	1
Continuous stiffness	4	2	0	1

B) Objective Parameters

Goniometric examination of restricted neck movements.

1. Flexion

Flexion	Grades	Before treatment (n=15)	After treatment (agnikarama chikitsa) (n=15)	After Treatment (Marma Chikitsa) (n=15)
No restriction, i.e., able to touch the interclavicular line 80°	0	0	10	6
Movement from 70°-80°	1	3	3	4
Movement from 60°-70°	2	5	2	3

Movement from 50°-60°	3	4	0	1
Movement less than 50°	4	3	0	1

2. Extension

Extension	Grades	Before treatment (n=15)	After treatment (agnikarma Chikitsa) (n=15)	(Agnikarma Chikitsa) (n=15)
Normal, i.e. able to extend the head up to the level when the tip of the nose and forehead become in a horizontal plane at 40°	0	0	9	5
Movement from 40°-50°	1	3	4	5
Movement from 50°-60°	2	6	2	3
Movement from 60°-70°	3	4	0	1
Movement more than 60°	4	2	0	1

3. Lateral flexion

Lateral Flexion	Grades	Before treatment(n=15)	After treatment (Agnikarma Chikitsa) (n=15)	After Treatment (Marma Chikitsa) (n=15)
Normal, i.e., able to touch the shoulder tip at 45°	0	0	10	6
Movement from 45°-55°	1	3	3	4
Movement from 55°-65°	2	6	2	3
Movement from 65°-75°	3	4	0	1
Movement more than 75°	4	2	0	1

Criteria for overall assessment

Relief in signs and symptoms	Inference
80-100%	Complete remission
60-79%	Marked remission
40-59%	Moderate remission
20-40%	Mild remission
Less than 20%	Unchanged

MANAGEMENT OF DATA

All clinical data collected during the study were systematically recorded, coded, and maintained by the principal investigator. The confidentiality and accuracy of the patient information were ensured throughout the study. Data analysis was performed using appropriate statistical methods to evaluate the efficacy of the two treatment modalities.

INFORMED CONSENT

All participants were informed about the nature, objectives, procedures, potential benefits, and possible risks associated with the study in their native language. Written informed consent was obtained from each participant before enrollment. Participants were assured that they had the right to withdraw from the study at any stage without affecting their treatment plan.

DISCUSSION

Marma Chikitsa vs Agnikarma Chikitsa in Cervical Spondylosis (Manyastambha).

PARAMETER	MARMA CHIKITSA	AGNIKARAM CHIKITSA
Pain relief	Good	Usually faster and more pronounced
Neck stiffness	Effective	Highly effective
Invasiveness	Non- invasive	Minimally invasive
Patient comfort	More comfortable	Mild discomfort during procedure
Side effects	Very few	Risk of minor burns if not performed properly
Cost	usually lower	Slightly higher
Repeatability	Can be done frequently	Requires proper intervals
Patient acceptance	High	Moderate

Agnikarma is generally considered more effective for pain and stiffness relief in Vata-Kapha disorders such as Manyastambha.

1. Agnikarma possesses Ushna (hot), Tikshna (sharp), and Sukshma (penetrating) properties.
2. This helps remove the Srotorodha (channel obstruction).
3. This pacifies aggravated Vata and Kapha doshas.
4. This improves the local blood circulation.
5. This method provides quicker pain relief compared to many conservative therapies.
6. Sushruta specifically mentioned that diseases treated with Agnikarma have a lower likelihood of recurrence.

Mode of Action of Agnikarma

On muscles

Rise in temperature.

Sudden contraction of muscles.

Followed by relaxation Increase in the efficiency of their action.

On Blood Circulation

Stimulation of superficial sensory nerves. Dilation of local blood vessels.

Increase in blood circulation.

On Pain

Increase in local metabolism. Metabolites excreted.

Blood circulation normalizes.

Thus, reduction in the intensity of pain.

Advantages of Marma Chikitsa

1. Completely non-invasive.
2. It is safe and comfortable for most patients.
3. It improves the energy flow and muscular relaxation.
4. It is suitable for elderly or fearful patients.
5. It can be combined with physiotherapy and Ayurvedic treatment.

CONCLUSION

Although both Marma Chikitsa and Agnikarma Chikitsa were found beneficial in the management of Manyastambha (Cervical Spondylosis), Agnikarma may provide comparatively faster relief in pain and stiffness due to its Ushna and Vata-Kapha shamaka properties. However, Marma Chikitsa remains a safe, non-invasive, and patient-friendly therapeutic approach with significant clinical benefits.

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