



Review Article

Volume 15 Issue 04

April 2026

A REVIEW OF MARMA ANATOMY AND ITS CLINICAL APPLICATION IN MARMA CHIKITSA

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ABSTRACT

Background: *Marma* is a unique anatomical and physiological concept described in *Ayurveda*, representing vital points of the body where *Mamsa* (muscle), *Sira* (vessels), *Snayu* (ligaments), *Asthi* (bones), and *Sandhi* (joints) converge. These sites are considered seats of *Prana* and are highly significant in maintaining health and vitality. Ancient *Acharyas* emphasized the protection of *Marma* due to their role in sustaining life and preventing disability. In recent years, *Marma Chikitsa* has emerged as a non-invasive therapeutic modality utilizing stimulation of specific *Marma* points for the management of various musculoskeletal, neurological, and psychosomatic disorders. **Aim:** To review the anatomical basis of *Marma* and evaluate its clinical application in *Marma Chikitsa*. **Objectives:** To study the anatomical concept of *Marma* described in classical *Ayurvedic* literature. To analyze the classification and structural composition of *Marma*. To correlate *Marma* anatomy with modern anatomical structures. To evaluate the clinical applications of *Marma Chikitsa*. **Materials and Methods:** A comprehensive review of classical *Ayurvedic* texts including *Sushruta Samhita*, *Ashtanga Hridaya*, and *Charaka Samhita* was conducted. Relevant modern anatomical and clinical literature was reviewed from scientific databases. Information

related to *Marma* anatomy, classification, and therapeutic applications was systematically analyzed. **Observations and Results:** A total of 107 *Marma* points are described in classical literature. These points correspond to important neurovascular, musculoskeletal, and connective tissue structures. Clinical studies suggest beneficial effects of *Marma Chikitsa* in pain management, rehabilitation, stress reduction, and functional recovery. **Discussion:** The anatomical and physiological significance of *Marma* closely resembles modern concepts of neurovascular bundles, trigger points, and fascial networks. Therapeutic stimulation of *Marma* may influence neuromuscular and autonomic pathways. **Conclusion:** *Marma* anatomy provides a scientific foundation for *Marma Chikitsa*. Integration of classical knowledge with modern anatomy can enhance the understanding and therapeutic utility of this traditional healing science.

Keywords: *Marma, Marma Chikitsa, Prana, Anatomy, Neurovascular Points, Ayurveda*

INTRODUCTION

The science of *Marma* occupies a distinguished place in *Ayurvedic* literature and is primarily elaborated in *Sushruta Samhita*. The term *Marma* denotes vital anatomical locations where *Mamsa, Sira, Snayu, Asthi,* and *Sandhi* unite. These regions are considered repositories of *Prana* and are essential for sustaining life and physiological functions. Injury to these points may lead to pain, deformity, organ dysfunction, or death depending upon the severity and location of trauma.¹

The concept of *Marma* developed initially in relation to surgery and warfare. Ancient surgeons and warriors were instructed to protect these vital structures because trauma to specific *Marma* points could produce immediate or delayed fatal consequences. The detailed anatomical descriptions provided by *Acharya Sushruta* indicate an advanced understanding of human anatomy and trauma management.²

With the evolution of therapeutic practices, the concept of *Marma* extended beyond surgical relevance and became a foundation for various healing modalities. *Marma Chikitsa* involves gentle stimulation, pressure application, massage, and energy balancing techniques at selected *Marma* points to restore physiological harmony and promote self-healing mechanisms.³

Modern anatomical studies have identified similarities between *Marma* locations and important neurovascular structures, nerve plexuses, endocrine glands, trigger points, and

fascial intersections. This correlation has renewed scientific interest in understanding the clinical applications of *Marma Chikitsa* in pain management, rehabilitation medicine, neurological disorders, and preventive healthcare.⁴

AIM AND OBJECTIVES

Aim

To review the anatomical basis of *Marma* and evaluate its clinical application in *Marma Chikitsa*.

Objectives

1. To study the anatomical concept of *Marma* described in classical *Ayurvedic* literature.
2. To analyze the classification and structural composition of *Marma*.
3. To correlate *Marma* anatomy with modern anatomical structures.
4. To evaluate the clinical applications of *Marma Chikitsa*.

MATERIALS AND METHODS

This review study was conducted through a detailed examination of classical *Ayurvedic* texts including *Sushruta Samhita*, *Charaka Samhita*, *Ashtanga Hridaya*, and relevant commentaries. Contemporary anatomical textbooks and scientific articles related to *Marma*, neuroanatomy, pain management, and complementary medicine were reviewed. Data concerning anatomical characteristics, classification, physiological significance, and therapeutic applications of *Marma* were systematically compiled and analyzed.

CONCEPTUAL STUDY – AYURVEDIC REVIEW

Concept of *Marma*

The term *Marma* is derived from the root "Mri" meaning death or vitality. According to *Sushruta*, *Marma* are vital anatomical locations where injury may produce severe consequences because they are the seats of *Prana*.⁵

Definition of *Marma*

"Mamsa Sira Snayu Asthi Sandhinam Sannipatah Marma."

This definition indicates that *Marma* represents the meeting point of muscle, vessels, ligaments, bones, and joints.

Historical Importance of *Marma*

Marma science evolved from battlefield medicine and surgical practice. Ancient physicians recognized that injuries at certain anatomical sites caused disproportionate morbidity and mortality. Consequently, detailed descriptions of these vital points were incorporated into surgical training and military medicine.⁶

Structural Components of *Marma*

1. *Mamsa* (Muscle)

Provides protection and support to underlying structures.

2. *Sira* (Blood Vessels)

Responsible for circulation and nourishment.

3. *Snayu* (Ligaments and Tendons)

Provide stability and movement.

4. *Asthi* (Bone)

Forms the skeletal framework.

5. *Sandhi* (Joint)

Facilitates mobility and biomechanical function.

Classification of *Marma*

According to Structural Dominance

Type	Number
<i>Mamsa Marma</i>	11
<i>Sira Marma</i>	41
<i>Snayu Marma</i>	27
<i>Asthi Marma</i>	8
<i>Sandhi Marma</i>	20

Total = 107

According to Prognosis

Type	Number
<i>Sadyah Pranahara</i>	19
<i>Kalantara Pranahara</i>	33
<i>Vishalyaghna</i>	3
<i>Vaikalyakara</i>	44
<i>Rujakara</i>	8

Regional Classification

Region	Number
Upper Extremities	22
Lower Extremities	22
Thorax and Abdomen	12
Back	14
Head and Neck	37

Total = 107

Physiological Importance of Marma**Seat of Prana**

Marma points are considered repositories of vital energy responsible for life maintenance.

Neuromuscular Regulation

They coordinate sensory and motor functions.

Energy Transmission

They act as channels connecting body, mind, and consciousness.

Homeostatic Control

They maintain physiological equilibrium.

Principles of Marma Chikitsa

Pressure Stimulation

Gentle stimulation of selected *Marma* points.

Energy Balancing

Correction of disturbed *Prana* flow.

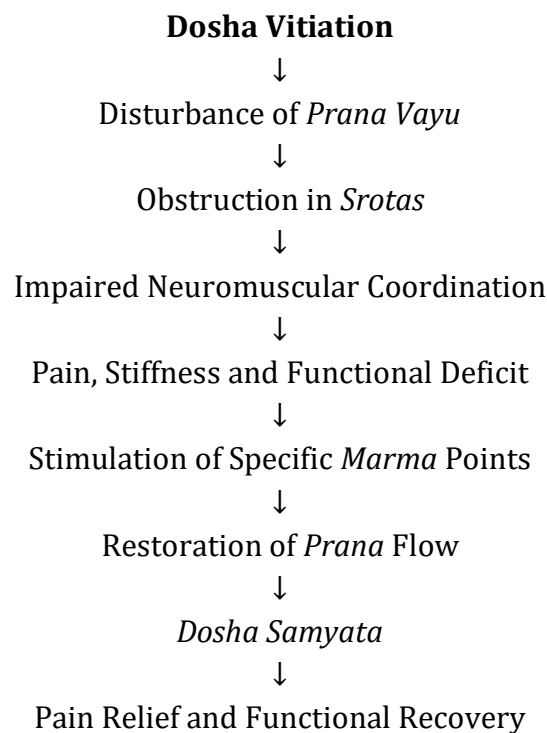
Pain Relief

Modulation of neuromuscular pathways.

Functional Restoration

Enhancement of tissue healing and organ function.

SAMPRAPTI



MODERN REVIEW

Modern Anatomical Correlation of *Marma*

Modern anatomical studies suggest that most *Marma* points correspond to areas containing dense concentrations of nerves, blood vessels, lymphatics, muscles, fascia, and connective tissue.⁷

Neurovascular Correlation

Many *Marma* points are located near:

- Major nerve plexuses
- Peripheral nerve trunks

- Arterial bifurcations
- Venous confluences

Examples include:

Sthapani Marma

Corresponds to the glabellar region containing branches of trigeminal nerve.

Hridaya Marma

Corresponds to the cardiac plexus and heart.

Nabhi Marma

Corresponds to the umbilical region rich in autonomic neural connections.

Fascial Connections

Modern fascia research demonstrates that fascial planes serve as communication networks throughout the body. Several *Marma* points coincide with major fascial intersections, explaining their systemic effects.⁸

Neurophysiological Mechanisms

Gate Control Theory

Pressure stimulation may inhibit pain transmission.

Endorphin Release

Activation of endogenous opioid pathways.

Autonomic Modulation

Improvement in parasympathetic activity.

Neuroplasticity

Enhancement of neural adaptation and recovery.

Clinical Applications

Musculoskeletal Disorders

- Low back pain
- Cervical spondylosis
- Osteoarthritis

- Frozen shoulder

Neurological Disorders

- Headache
- Migraine
- Facial paralysis
- Neuropathic pain

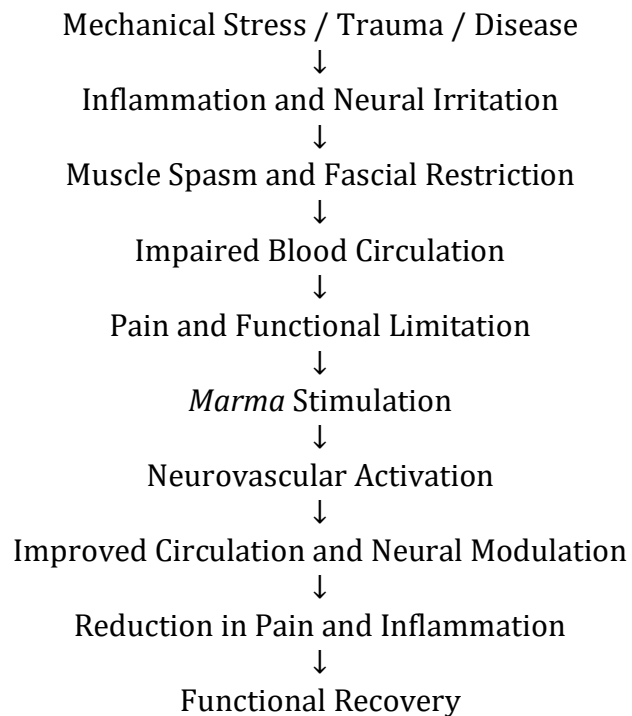
Psychological Disorders

- Anxiety
- Stress
- Insomnia

Rehabilitation

- Post-stroke recovery
- Sports injury rehabilitation
- Functional restoration

PATHOGENESIS



RESULTS AND FINDINGS

1. Classical literature describes 107 anatomically significant *Marma* points.
2. *Marma* points represent convergence zones of multiple vital structures.
3. Most *Marma* locations correspond to important neurovascular and musculoskeletal structures.
4. Injury to *Marma* can produce predictable clinical consequences.
5. *Marma Chikitsa* demonstrates beneficial effects in pain management.
6. Therapeutic stimulation improves circulation and neuromuscular function.
7. Clinical observations suggest effectiveness in musculoskeletal and neurological disorders.
8. *Marma* anatomy provides a bridge between traditional and modern medical sciences.

DISCUSSION

The classical description of *Marma* demonstrates a sophisticated understanding of human anatomy and physiology. The strategic locations of these vital points indicate recognition of the functional importance of neurovascular and musculoskeletal structures long before the development of modern anatomical sciences.⁹

Modern anatomical correlations reveal that many *Marma* points coincide with major nerve plexuses, vascular junctions, fascial intersections, and musculoskeletal transition zones. These observations support the hypothesis that *Marma* points function as important anatomical and physiological control centers within the body.¹⁰

The therapeutic benefits observed in *Marma Chikitsa* may be explained through multiple mechanisms including neuromodulation, improved microcirculation, autonomic regulation, endorphin release, and fascial relaxation. The integration of classical *Ayurvedic* wisdom with modern anatomical knowledge may contribute to the development of evidence-based complementary therapeutic approaches.¹¹

CONCLUSION

Marma anatomy represents one of the most remarkable contributions of *Ayurveda* to medical science. The 107 *Marma* points described in classical literature correspond closely with vital neurovascular and musculoskeletal structures recognized in modern anatomy. *Marma Chikitsa* utilizes this anatomical knowledge to promote healing, relieve pain, improve

physiological function, and restore balance within the body. Further anatomical, physiological, and clinical research is required to establish stronger scientific evidence for the therapeutic applications of *Marma Chikitsa* and facilitate its integration into contemporary healthcare systems.

CONFLICT OF INTEREST- Nil

SOURCE OF SUPPORT - None

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