ROLE OF STHAPANI MARMA IN THE MANAGEMENT OF SHIRAHSHOOLA: AN AYURVEDIC AND CONTEMPORARY REVIEW

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Abstract

Background: Shirahshoola is an umbrella term in Ayurveda that refers to various forms of headaches, each differing in the dominance of doshas, etiology, and signs and symptoms. As there is such a diversity in the presentation of headaches, one treatment may not suffice, and thus, Marma Chikitsa has been suggested as a complementary non-invasive treatment modality for certain forms of head ailments. The marmas of the head include the Sthapani Marma which is located in the glabellar area.

Objective: This paper aims to discuss the classical foundation, anatomical understanding in the current era, and therapeutic importance of Sthapani Marma stimulation for the treatment of Shirahshoola.

Methods: A narrative review was done using classical Ayurveda literature, conceptual articles in the present era, anatomical correlation, and clinical evidence.

Results: The classical texts describe Sthapani Marma to be a Vishalyaghna Sira Marma found at the location between eyebrows. In contrast, current understanding associates Sthapani Marma with glabellar area and its neurovascular and muscular elements. The literature indicates that stimulation of this marma could be useful for headaches involving frontal, orbital, and midline areas especially Ardhavabhedaka, Suryavarta, and Anantavata. On the other hand, its usage in Shankhaka seems to be difficult owing to differences at anatomical and clinical levels. There are no concrete research studies on the same.

Conclusion: Sthapani Marma therapy seems to have good potential in being an effective, cost-effective, and non-invasive modality in the holistic treatment of some forms of Shirahshoola. It would make more sense to use Sthapani Marma in frontal or midline types of headache rather than lateral or temporal. Future clinical studies are necessary to ascertain its effectiveness and role in Ayurvedic medicine.

Keywords: Shirahshoola, Sthapani Marma, Marma Chikitsa, headache, Ardhavabhedaka, Suryavarta, Anantavata.

How to cite this article: Ansari AA, Gautam VL, Abhinav. Role of Sthapani Marma in the Management of Shirahshoola: An Ayurvedic and Contemporary Review. Int J Drug Deliv Technol. 2026;16(66s):625-631. DOI: 10.25258/ijddt.16.66s.59

Introduction:

Shirahshoola is an expansive term in Ayurveda referring to head pains and includes various conditions based on doshas involved, duration, accompaniments, and causation. The head is viewed as an important anatomical site in classical Ayurvedic medicine due to the presence of Marmas, sensory organs, and integration of prana and other higher bodily functions[1]. Therefore, treatment through Marma therapy was viewed as a complementary treatment modality in cases involving head-related conditions along with other approaches like Nasya therapy and Shirodhara among others[2].

Sthapani Marma is considered as one of the most important marmas of the head and face and has traditionally been described as situated between the two eyebrows within the area called the glabella located above the root of the nose. Stimulation of Sthapani Marma has been reported to have effects on headache, stress, sleep, and sinus problems[2].

Concept of Shirahshoola:

Shirahshoola is neither a disease in itself nor is it a homogeneous condition in Ayurvedic literature. There are many etiological factors responsible for its occurrence, making it vataja, pittaja, or kaphaja shirahshoola, or a combination of one or more of the above. Clinically speaking, it may be similar to migraine headaches, tension headaches, sinus headaches, cluster headaches, or secondary headaches. Due to this variability, no treatment modality may be appropriate for all patients; hence,

marma therapy needs to be personalized accordingly[3].

The Ayurvedic literature on headache treatment highlights the significance of treatment modalities targeting the head, considering that the condition is associated with prana-vayu, sadhaka pitta, tarpaka kapha obstruction, and sensory disturbances. Sthapani Marma provides an effective solution for treating such problems through local application[4].

Differential Ayurvedic headache types:

It has been mentioned in the literature that Sushruta had categorized 11 different kinds of Shiroroga often referred as Shirahshoola, whereas Charaka had less varieties[5,1]. Acharya Charaka has classified Shirahshoola into five types depending on the dosha involved: Vataja, Pittaja, Kaphaja, Sannipataja and Krimija Shiroroga. Charaka's system is usually referred to when considering dosha-related classifications of Shirahshoola[6,1].

While Acharya Sushruta had provided a detailed classification of Shiroroga which included 11 different forms of Shirahshoola. Some of the varieties found in literature are the following:

Doshaja types: Vataja, Pittaja, Kaphaja, Raktaja, Sannipataja.

Specific types: Kshayaj, Krimija, Ardhavabhedaka, Suryavarta, Anantavata, Shankhaka, and related severe head disorders[5,7].

Such an approach is beneficial in understanding the various types of headaches and choosing supportive treatment modalities like stimulation of Sthapani Marma.

Ardhavabhedaka:

The description of ardhavabhedaka refers to an intense and piercing type of unilateral headache, frequently accompanied by giddiness and repeated episodes. According to many reviewers, ardhavabhedaka can be considered a clinical equivalent of a migraine. The sources provide various descriptions where either Vata alone or any three doshas become imbalanced; typically, ardhavabhedaka affects one side of the head, including the eyebrow or orbit region[8,5]. Headache usually appears at an interval of 15 or 10 days[5].

Suryavarta:

The Suryavarta is traditionally explained as a headache which starts early in the morning, worsens as the sun rises, becomes more intense during noon time, and subsides in the afternoon/evening. Suryavarta is usually considered a Tridoshaja or Vata-Pitta dominant type of headache, and current references associate it with sinus/forehead type headache syndromes[9,5].

Anantavata:

It has been reported that Anantavata is a highly painful and distressing Shiroroga wherein the vitiation of the doshas, primarily vata accompanied by other doshas, causes excruciating pain in the posterior aspect of the neck, the eyes, eyebrows, temples, base of nose, and jaws. The features of neck rigidity, problems of the eyes, palpitations in the cheeks, difficulty in moving the jaw, etc., are among the symptoms of this disorder[5]. It is often correlated with pain pattern of trigeminal neuralgia in many modern studies owing to these reasons. In terms of Sthapani Marma, the significance of Anantavata lies in its presentation of pain in the forehead, orbit, and eyebrows areas[10].

Shankhaka:

Description of Shankhaka is given to be as an intense and violent pain occurring in the temporal area of the head due to the vitiation of Vata together with Kapha, Pitta, and Rakta. This is taken to be a serious and complex type of Shiroroga condition that may be lethal if left unattended[5]. In modern medical terminology, Shankhaka may be regarded as temporal pain disorders, which means that it is highly important for the differential diagnosis of Shirahshoola, though the site of the disease is lateral compared to that of Sthapani Marma[11].

Concept of Sthapani Marma:

Sthapani marma is conventionally defined as located at the central part of the forehead, in the space between the eyebrows and above the base of the nose[12]. It is considered an essential marma and has been found to be associated with regulating the mind and the senses as well as pranic functions in numerous modern explanations[11]. Anatomically, according to one study, the area in question seems related to anatomical structures like the supra trochanteric nerves and blood vessels, procerus muscles, and the frontalis area, thereby lending plausibility to the area's sensitivity. Since this area receives strong innervation and occupies a central position in the frontal part of the cranium, it may affect pain sensation and relaxation when stimulated[14].

Table 1. Classical and modern interpretations of Sthapani Marma with relevance to Shirahshoola.

Aspect	Classical Ayurvedic interpretation	Modern interpretation
Location	Between the two eyebrows, in the glabellar region or superciliary arches[15,16]	Glabella, the midline prominence between the eyebrows[15]
Classification	Described as a Vishalyaghna Marma and also as a Sira Marma[16,17]	Considered a highly sensitive neurovascular area with rich anatomical structures[15]
Measurement	Half Angula in size[15,16]	A small but densely innervated and vascular region in the frontal midline[15,18]

Structural Basis	Predominantly composed of Sira, with Vayu dominance; some authors note associated Mamsa, Asthi, Snayu, and Sandhi components in lesser proportion[15].	Skin, superficial fascia, procerus, corrugator supercilii, supratrochlear nerve and vessels, periosteum, frontal bone, and frontal sinus may lie in the region[15,19]
Injury effect	Injury or trauma may be fatal; removal of lodged foreign body can lead to death as described in Vishalyaghna Marma[15,16]	Trauma may cause severe bleeding, neurovascular injury, or damage to deeper frontal and intracranial structures[15,18,19]
Functional significance	Associated with Prana, regulation, and control of head-related functions; some sources link it to Ajna chakra and subtle energy pathways[15]	Correlated with psychophysiological regulation, stress reduction, and possible effects on brain-related functions[15,19]
Therapeutic relevance	Stimulation is described in marma therapy, especially for headache, stress, and Ardhavabhedaka[15,20]	Used as a gentle pressure point in complementary therapy for headaches, relaxation, and sinus-related complaints[20]
Related science	Siddha literature correlates this site with Tilartha Kalam[20]	Cross-disciplinary anatomical correlation supports the glabellar region as a clinically meaningful landmark[20]

Note: The classic description of sthapani marma indicates that it is a vishalyaghna type of sira marma present between the two eyebrows[12]. According to modern anatomy, it can be correlated to the glabellar area, which has closely associated neurovascular and skeletal connections. The association with shirahshoola is based on the fact that this marma point belongs to the frontal part of the head, where manipulation might affect headache and other stress-related issues[21,15].

Therapeutic rationale:

The classic approach to Sthapani stimulation lies in controlling prana, soothing the vata, and balancing the mental and sensory functions. Modern interpretative literature suggests that by putting pressure on this marma point, an effect on neural coordination, autonomic balance, and local muscle relaxation can be achieved to reduce pain due to headaches[13,15].

When discussing head-specific marma points, Sthapani is frequently referred to in the same breath as Apanga, Shankha, Avarta, Adhipati, Simanta, and Vidhura. The reason being that the use of Sthapani alone is not sufficient but must be looked at as part of a whole system of marma points.[4].

Evidence from literature

The existing literature is mainly comprised of conceptual review articles, narrative reviews, and small case studies, instead of large trials. One such review highlights the beneficial role of Sthapani Marma stimulation in cases of migraines, headaches, sinusitis, mental disorders, insomnia, and eye problems due to refractive error. However, one should take care while interpreting these findings as there are no studies comparing them with other modalities[22,23].

Migraine and Ardhavabhedaka are associated with studies that state improvement in terms of severity, frequency, and duration of headache following marma therapy interventions, whereas other studies indicate that marma therapies are effective in relieving stress and anxiety. Another study focusing on the effect of marma therapy on head, neck, and eyes has also found marma to be effective for headache and migraine, though further scientific proof is needed[24, 22].

Clinical interpretation

It would be ideal to consider Sthapani Marma stimulation therapy as a supplementary therapy that uses the principles of Ayurveda medicine in Shirahshoola. It could particularly apply in the management of frontal headaches, stress headaches, sinus headaches, and migraine headaches because of the need for forehead relaxation and mental calmness[25,2].

Practical forms of stimulation mentioned in literature include the use of mild pressure, gentle massage of fingertips, or combining them with other treatments such as Shiroabhyanga, Nasya, and Shirodhara. It is possible for one to argue that Sthapani Marma can be an economical and simple addition to treatment protocols[26].

Modern correlation

Current literature frequently associates Sthapani Marma with neurological and circulatory elements in the forehead area, and even mentions probable associations with the pituitary gland and psychosomatic control, although these associations

are more speculative than experimentally supported. The importance of this topic is to not to be too physiologically emphatic, but to indicate an intermediary connection between Ayurvedic and anatomical knowledge[13,14].

The forehead area has an integral role to play in techniques like meditation, yoga, and relaxation therapy that help in coping with stress-induced headaches. This increases the scientific validity of Sthapani Marma for treating Shirahshoola[27].

Discussion:

Management of Shirahshoola by stimulation of Sthapani Marma serves as an excellent case for illustrating the comprehensive approach of Ayurveda in dealing with neuro-sensory problems. Unlike other modern approaches that deal mainly with biochemical actions and reactions, Marma Chikitsa follows a multidimensional approach, wherein neuromuscular relaxation, autonomic balance, and pranic flow modulation are considered, especially useful in cases of combined mechanisms of pathogenesis of headaches[24,25].

The variability seen in the types of headaches described in Ayurveda, ranging from Ardhavabhedaka (unilateral headache resembling migraines) to Suryavarta (headaches that increase from sunrise until midday) and Anantavata (headache similar to trigeminal neuralgia), highlights the importance of customizing treatment approaches. The Sthapani Marma point lies strategically within the glabella area, and as such, it would be beneficial anatomically in affecting the frontal, orbital, and supratrochlear nerves that are often involved in the pathogenesis of tension-type headache, frontal sinus headache, and migraines with frontobasal origin[2].

Besides, the traditional concept that Sthapani is a Vishalyaghna Sira Marma or an injury to which can cause death also requires that such a treatment should be done with utmost care and not with forceful manipulations[12]. Such safety considerations become highly essential while trying to apply traditional Ayurvedic knowledge in modern times. Today's literature provides credible mechanistic explanations for the Sthapani Marma stimulation. First, the glabellar region is rich in nerves, including those of the supratrochlear and infraorbital nerves, which are the branches of the trigeminal nerve (V2 and V3)[19]. Hence, stimulation of this site might affect trigeminal autonomic reflex pathways involved in the development of migraines. Second, there are two muscular structures in this location—the procerus and corrugator supercilii muscles[28].

However, some of the contemporary interpretations have suggested that the Sthapani Marma may affect the functions of the pituitary gland and hormonal balance due to its close location relative to the hypothalamus-pituitary axis. The link between Sthapani and Ajna Chakra in the practices of yoga and siddhas (Tilartha Kalam) also suggests the possible psychophysiological implications of Sthapani activation that could manifest as stress-relieving and clarity-inducing effects, useful for treating certain stress-induced or psychogenic headaches[29].

As far as the clinical approach is concerned, Stahpani Marma therapy can be employed as a complementary non-invasive intervention for the treatment of headaches, especially in scenarios where patients look for safe and economical methods for their ailment. The combination of Sthapani Marma with other techniques that are used in the field of Ayurveda, like Shirodhara, Nasya, and Shiroabhyanga, can also yield better results[30].

Considering the modern era of headache management, where multidisciplinary approach is recommended as part of lifestyle changes, stress reduction, and medications, the Marma Therapy can be considered an integrative approach of mind-body medicine that falls in line with current recommendations for the use of relaxation techniques, biofeedback therapy, and acupuncture. However, it will require scientific evidence from randomized controlled trials for its validation[3].

Evidence quality and research gaps

The existing body of research that supports Sthapani Marma treatment in Shirahshoola involves mainly conceptual analysis, narrative review, and case studies but lacks any randomized controlled trial (RCT) or large-scale clinical study-based evidence. Although case studies on Marma therapy for Ardhavabhedaka and Suryavarta have been found to show considerable relief in symptoms (such as 90% reduction in head pain for a case of Suryavarta), the results cannot be generalized without proper validation methodology[31, 32, 25].

Limitations

The major limitation here is the absence of standard procedures regarding pressure, time period, frequency, and patients. Another limitation is the use of conceptual articles or low-level evidence from many sources, thus making our conclusion conservative. Another problem is that there is a diagnostic heterogeneity in relation to Shirahshoola; it could possibly be a combination of many headache types, which means that researchers are not very clear about what subtype is used. This is another important thing to discuss in the essay[23, 33].

Future research directions

To further the scientific study of Sthapani Marma therapy in Shirahshoola, future investigations need to concentrate on the following areas:

Marma standardization: Establishing standardized guidelines with respect to technique, dose, and patient selection.

Clinical trials: Carrying out clinical trials involving Sthapani Marma therapy in different subtypes of headaches such as migraine without aura and tension-type headache.

Pathways investigation: Studying the neurophysiological, autonomic, and endocrine pathways related to Marma therapy through techniques like EEG recording and heart rate variability.

Comparison with other therapies: Comparing Marma therapy to other treatment methods like acupuncture and medications.

Clinical implications:

Given the present limitations in research evidence, it is reasonable to include Sthapani Marma stimulation in integrative management of headache due to its plausibility and anatomical reasons, as well as continuity of application. Physicians have to focus on educating their patients about safety measures and risks involved and getting their prior informed consent for Marma therapy as an auxiliary form of treatment.

Conclusion

Management of Shirahshoola using Sthapani Marma is an exciting but under-researched domain in the field of Ayurveda as an effective treatment modality for headaches. The current literature reveals that Sthapani Marma, which is present centrally in the glabellar area between the eyebrows, has a clear-cut classical definition as a Vishalyaghna type of Sira Marma, along with its plausible anatomical equivalent that includes the supratrochlear nerve, procerus muscle, and frontal bone structures. Such anatomical and dosha features enable the use of this marma for headache presentations localized at the front, orbit, and midline[5,19].

On the other hand, the application of stimulation of Sthapani Marma is relevant on a conditional basis. It is useful in cases of frontal and midline headaches, but not in Shankhaka because of anatomical inconsistencies and criticality of the syndrome. Therefore, this difference demonstrates that Marma Chikitsa should be diagnosed specifically and treated individually, rather than using one therapy for all types of headache.

Altogether, stimulation of Sthapani Marma seems like a promising, non-invasive, and inexpensive supportive modality for the treatment of Shirahshoola, especially headaches that arise due to stress and frontal region pain. While there is adequate theoretical reasoning from the classical texts of Ayurveda, anatomy, and the present-day narrative or case studies available, it is imperative that rigorous scientific research is conducted prior to making therapeutic claims. This is important before Sthapani Marma therapy can become a standard treatment modality for headache management. It must be stressed upon clinicians that Marma therapy is a supportive treatment method[24, 25, 30].

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