

Review Article

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“VIDDHA KARMA AND MARMA THERAPY IN PAIN MANAGEMENT: CLASSICAL BASIS AND EMERGING EVIDENCE”**Tushar Tapadiya¹****AFFILIATIONS:**

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ABSTRACT

Background: Chronic musculoskeletal pain is a leading cause of disability. Ayurveda describes 107 Marma points, vital sites where muscles, vessels, ligaments, bones and joints meet, and two related therapeutic approaches: Viddha Karma (therapeutic puncture with a needle) and Marma therapy (manual stimulation of Marma points). These practices share features with acupuncture and dry needling, which have a substantial evidence base. **Objective:** To review the classical concepts of Marma and Viddha Karma, their current clinical use in pain, the emerging evidence from Ayurvedic trials, and the relevant evidence from acupuncture and dry needling. **Methods:** Narrative review of Sushruta Samhita and of clinical trials, trial protocols, systematic reviews and mechanistic studies. **Results:** Sushruta classifies Marma by structure, region and the consequences of injury, and describes Vedhana (puncture) as one of the eight surgical procedures. Modern Marma therapy and Viddha Karma are used for low back pain, sciatica, neck pain, frozen shoulder and knee pain. A small three-arm randomised trial in cervical spondylosis found that Marma therapy, transcutaneous electrical nerve stimulation and their combination all improved pain, disability and mobility, with the combination best. A randomised trial of Marma therapy against physiotherapy in lumbar disc herniation with radiculopathy has been completed with results awaited. An individual patient data meta-analysis showed that acupuncture is superior to sham and usual care for chronic pain, and meta-analyses support dry needling for some musculoskeletal conditions. **Conclusion:** Marma therapy and Viddha Karma are plausible, low-cost pain treatments with emerging but limited evidence. Standardised point selection, sham-controlled trials and validated outcome measures are needed.

KEYWORDS: Marma; Viddha Karma; Marma therapy; pain management; acupuncture; dry needling; Sushruta; musculoskeletal pain

INTRODUCTION

Musculoskeletal conditions, especially low back pain and neck pain, are among the leading causes of years lived with disability worldwide^[1]. Treatment typically combines analgesics, physiotherapy, exercise and psychological approaches, but many patients continue to experience pain, and long-term analgesic use carries risks^[2]. Clinical guidelines for chronic low back pain recommend non-drug treatments first, including exercise, multidisciplinary rehabilitation and acupuncture^[3].

Several traditional medical systems have developed methods of treating pain by stimulating specific body points. Acupuncture, from Chinese medicine, has been studied extensively and is now offered in many health systems for chronic pain. Dry needling, which inserts needles into myofascial trigger points, has been adopted by physiotherapists in many countries.

Ayurveda has its own system of vital points, the Marma, described in detail by Sushruta^[4]. Marma knowledge was originally developed in the context of surgery and warfare, to identify points where

Classification

injury could be fatal or disabling. In modern Ayurvedic practice, Marma points are used therapeutically, either by manual stimulation (Marma therapy or Marma Chikitsa) or by needle puncture (Viddha Karma). This review summarises the classical basis, current practice and evidence for these approaches.

METHODS

Classical sources were Sushruta Samhita, Sharira Sthana 6 (Pratyeka Marma Nirdesha) and Sutra Sthana 25^[4]. Modern literature was identified through PubMed, Google Scholar and Ayurveda journals using Marma, Marma therapy, Marma Chikitsa, Viddha Karma, Viddhakarma, acupuncture, dry needling and pain. This is a narrative review.

CLASSICAL BASIS

The concept of Marma

Sushruta defines Marma as a site where Mamsa (muscle), Sira (vessels), Snayu (ligaments and tendons), Asthi (bone) and Sandhi (joints) meet, and where Prana (life force) resides^[4]. Injury to these points can cause death, severe pain or disability. He describes 107 Marma points in the body.

Table 1: Classification of Marma

Basis	Categories
Predominant structure	Mamsa Marma (muscle), Sira Marma (vessels), Snayu Marma (ligament/tendon), Asthi Marma (bone), Sandhi Marma (joint)
Region	Upper limbs, lower limbs, trunk (abdomen, chest, back), head and neck
Consequence of injury	Sadya Pranahara (immediate death), Kalantara Pranahara (delayed death), Vishalyaghna (death on removal of foreign body), Vaikalyakara (disability), Rujakara (pain)
Size	Measured in Angula (finger breadths), from half to four Angula

Sushruta classifies Marma in several ways^[4]:

The Rujakara (pain-producing) and Vaikalyakara (disability-producing) Marma are particularly relevant to pain management because they are often located near joints and tendons.

Viddha Karma

Vedhana (puncturing) is one of the eight surgical procedures (Ashtavidha Shastra Karma) described by Sushruta^[4]. Viddha Karma in modern Ayurvedic practice refers to puncturing specific points with a fine needle, without drawing blood or injecting substances, to relieve pain. It is mainly associated with the work of practitioners who developed

protocols based on Sushruta's descriptions of puncture sites for different diseases.

Marma therapy

Marma therapy uses gentle pressure, massage or stimulation of Marma points with the fingers or thumb, often for a few seconds repeated several times, sometimes combined with oil. It is especially practised in southern India and is used for musculoskeletal pain, neuromuscular conditions and rehabilitation.

CURRENT CLINICAL USE

Marma therapy and Viddha Karma are used for:

- Low back pain and sciatica (Gridhrasi)

- Neck pain and cervical spondylosis (Manyagraha, Greeva Sandhigata Vata)
- Frozen shoulder (Avabahuka)
- Knee osteoarthritis (Janu Sandhigata Vata)
- Heel pain and plantar fasciitis (Vatakantaka)
- Tennis elbow, headache and some neurological conditions

Points are selected based on the site of pain, the nearest Marma, and the practitioner's experience. Treatment is usually given in several sessions over one to four weeks.

EVIDENCE

Ayurvedic trials of Marma therapy

In a three-arm randomised clinical trial in 30 patients with grade 1 cervical spondylosis, patients received Marma Chikitsa, transcutaneous electrical nerve stimulation (TENS) or both, followed in all groups by cervical stretching and strengthening exercises^[5]. All three groups improved significantly in pain, disability and cervical range of motion over 30 days, and the combined group showed the greatest improvements. The trial was small and did not include a sham or exercise-only control.

A randomised, open-label, active-controlled trial of Marma therapy versus physiotherapy (TENS, hot packs, exercise, manual therapy and education) in 90 patients with MRI-confirmed lumbar disc herniation and radiculopathy has been registered and its protocol published^[6]. Both groups also received an oral Ayurvedic formulation. Outcomes include pain on a visual analogue scale at one and three months, Oswestry Disability Index, straight leg raise and quality of life. Enrolment has been completed and results are awaited. The authors noted that point selection was based on clinical experience rather

than a standardised protocol and that evidence for Ayurvedic treatments of low back and radicular pain had been largely limited to case reports^[6].

Many smaller Ayurvedic studies and case series report pain relief with Marma therapy or Viddha Karma in knee osteoarthritis, sciatica and frozen shoulder, but most lack randomisation, blinding or adequate control groups.

Evidence from related practices

Acupuncture. An individual patient data meta-analysis of trials including over 20,000 patients with chronic pain found that acupuncture was superior to both sham acupuncture and no acupuncture control for back and neck pain, osteoarthritis, headache and shoulder pain, and that its effects persisted over time^[7]. The difference between true and sham acupuncture was smaller than that between acupuncture and no acupuncture, indicating that part of the benefit is non-specific. An earlier systematic review of three-armed trials found a small analgesic effect of acupuncture over placebo acupuncture, and a moderate difference between placebo acupuncture and no acupuncture^[8].

Dry needling. A systematic review and meta-analysis found that trigger point dry needling by physiotherapists reduced pain in the short term compared with no treatment or sham needling in musculoskeletal conditions, with evidence of uncertain quality^[9].

These findings suggest that needling and point stimulation can produce real, though modest, pain relief, and that non-specific effects are substantial. They are relevant to Viddha Karma, which is mechanically similar to dry needling and acupuncture.

Table 2: Summary of evidence for Viddha Karma and Marma therapy

Intervention	Evidence	Main finding	Certainty (authors' judgement)
Marma therapy (cervical spondylosis)	Small RCT ^[5]	Improved pain, disability, mobility; best with TENS	Low
Marma therapy (lumbar radiculopathy)	Completed RCT; results awaited ^[6]	—	Not applicable
Viddha Karma	Case series and small studies	Pain relief reported	Very low
Acupuncture (chronic pain)	IPD meta-analysis ^[7]	Superior to sham care	High
Dry needling	Meta-analysis ^[9]	Short-term pain reduction	Low to moderate (related practice)

POSSIBLE MECHANISMS

The mechanisms of Marma therapy and Viddha Karma have not been studied directly, but research on acupuncture and needling suggests plausible pathways:

- **Neural modulation:** needle or pressure stimulation activates sensory nerves, which can inhibit pain transmission at the spinal level (gate control) and activate descending inhibitory pathways and release of endogenous opioids; different frequencies of electrical needle stimulation release different neuropeptides^[10-12].
- **Connective tissue mechanotransduction:** needle rotation causes connective tissue to wind around the needle, transmitting mechanical signals to cells; this may explain some local and distant effects^[13].
- **Myofascial effects:** needling of trigger points may release local muscle contraction knots and reduce sensitisation.
- **Expectation and context:** therapeutic ritual, practitioner attention and patient expectation contribute substantially to outcomes in all point-stimulation therapies^[7,8].

Many Marma points lie near joints, tendons, nerves and vessels, which may make them physiologically active sites for such stimulation.

SAFETY

Marma therapy using gentle pressure is very safe. Viddha Karma involves needle insertion and carries risks similar to acupuncture and dry needling, such as pain, minor bleeding, bruising, fainting, infection and, rarely, injury to underlying structures such as nerves, vessels or the pleura^[14]. Classical texts warn that injury to Marma points can be harmful, so needles should not be inserted deeply at sites where vital structures lie. Sterile single-use needles, knowledge of surface anatomy and caution over the chest wall are essential. Patients on anticoagulants or with bleeding disorders need special care.

RESEARCH PRIORITIES

1. **Standardisation:** develop and publish standard protocols for point selection, method, depth, duration and number of sessions for each condition.
2. **Anatomical mapping:** correlate Marma points with anatomical structures using imaging, and

compare them with acupuncture points and trigger points.

3. **Sham-controlled trials:** use non-penetrating needles for Viddha Karma and light touch at non-Marma sites for Marma therapy as controls.
4. **Comparisons with established treatments:** physiotherapy and exercise.
5. **Validated outcomes:** pain intensity, function (for example, Oswestry Disability Index, Neck Disability Index, WOMAC) and quality of life, with follow-up of at least three months.
6. **Mechanistic studies:** pressure pain thresholds, conditioned pain modulation and neuroimaging.

DISCUSSION

Sushruta's Marma doctrine is one of the most sophisticated pre-modern systems of surface anatomy, identifying sites where vital structures converge and injury is dangerous. Its therapeutic application in Marma therapy and Viddha Karma is a later development that has become popular in Ayurvedic pain practice.

The evidence for these therapies is at an early stage. Small trials and the forthcoming results of a larger randomised trial in lumbar radiculopathy will be important. The extensive research on acupuncture and dry needling provides a useful model: it shows that point-stimulation therapies can have real effects, but also that careful sham-controlled designs are essential because non-specific effects are large.

Marma therapy has the advantage of being non-invasive, inexpensive and potentially teachable to patients for self-care. Viddha Karma is quick and requires minimal equipment. Both could be integrated into multimodal pain management if their effectiveness is confirmed.

CONCLUSION

Marma therapy and Viddha Karma, based on Sushruta's description of vital points and therapeutic puncture, are promising pain treatments with emerging evidence from small trials. Related practices such as acupuncture and dry needling have stronger evidence. Standardised protocols, sham-controlled randomised trials and mechanistic studies are needed to establish the place of Marma-based therapies in pain management.

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