

## Clinical Anatomy of Foot Massage in Relation to Marma Therapy

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### How to cite this article:

Varsha Kulshrestha, Meenu S Khare/Clinical Anatomy of Foot Massage in Relation to Marma Therapy/Indian J of Ancient & Yoga. 2022;15(3): 103-106.

### Abstract

In natural healing today, the use of pressure point for massage has become a popular topic. In *Ayurveda*, these pressure points are called "Marmas", meaning 'vulnerable' or sensitive zone. Without knowing Marmas, we could not really understand our selves or interaction with our environment, nor create lasting balance and harmony in our lives. All major *Ayurvedic* texts refer to the total number of marmas as 107. Marmas are part of a greater 'sacred physiology' that maps out the body according to subtle energy currents and power points. Abhyanga or Massage is the main *Ayurvedic* method for treating Marmas. It combines the power of therapeutic touch along with the medicinal properties of oils, herbs and aromas. Therapeutic regions like marmas on the arms and legs are the most important for treatment purpose. They are easy to work on through procedures like massage, acupuncture, oils, aromas or ointments. Here an effort is made to understand the Marma therapy along with *Ayurvedic* massage (Abhyanga) specially Padabhyanga (Foot massage) on marma regions that are in need of stimulation or of release and use the appropriate methods to adjust their energy flow.

**Keywords:** Marma; Abhyanga; Massage; Foot massage; Nadi; *Prana*.

## INTRODUCTION

*Ayurveda* is India's traditional healing system. The science of Marma is the extraordinary and dynamic *Ayurvedic* therapy that has tremendous value in health disease, everyday living and in spiritual practice. Maharshi Sushruta described 107 Marmas. He said-सप्तोत्तरं मर्मशतं<sup>1</sup> this means that Marmas are important identifiable parts of our anatomy and reflect key physiological and psychological

processes that occur within it. Besides treating the body, Marma therapy can be used for panic healing or energy medicine in various forms. Therapeutic touch or Abhyanga in *Ayurveda* is the main method for treating Marmas, just as it is the main method for treating the surface of the body where most Marmas are located. Touch is the sensory power that corresponds to the cosmic air element. The air element in turn relates to prana or the cosmic life force. Touch conveys *Prana*, which is the main healing power of life.<sup>2</sup>

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**Received on:** 05.07.2022

**Accepted on:** 09.08.2022

## MATERIAL AND METHOD

Different *Ayurveda* classical text books viz. Charaksamhita, Sushrutasamhita etc., different text books of Anatomy like BD Chourasia's Human Anatomy, Neuroanatomy etc., different journal articles and different evidence based research articles with the key word searches with Marma, Massage therapy, Neuroanatomy etc. Information had been taken from all different *Ayurveda* as well



as Modern sources were described in the systemic manner.

## DISCUSSION

### *Marma Therapy for Massage*

An important principle of Marma therapy is quite simple. When a strong blow can cause injury, a mild touch can cause healing. This is the most important principle of Marma massage. (3) *Prana* at a deeper level carries the energy of love and consciousness, so therapeutic touch can help heal the mind and heart as well as the body. *Marmas* are sensitive areas, so massage should be done carefully<sup>4</sup>

### *Ayurvedic point of view*

In *Ayurveda*, to understand the massage therapy, we have to know 3 doshas and nadis rule over our internal climate by their ever changing interactions of movements Vata, Pitta and Kapha.

- Vata → In Massage therapy, Vata is responsible for carrying subtle energy or prana all over the body. This can be done by massage performed by the type of oils used. Of the five forms of vata dosha, *marmas* are most connected to *vyanavayu* which governs the skin circulation and the movement of *Prana* or vital energy, because karma of *vyanavayu* is circulation of *Prana*, *Rasa* etc. all over the body.<sup>5</sup>
- Pitta - Marma therapy can increase or decrease heat in the body, directly impacting pitta dosha. Of the 5 forms of Pitta doshas, *marmas* have a special connection to *bhrajaka pitta* which governs the skin and joints where most *marmas* are located. The application of therapeutic touch, heat or the use of aromatic oils directly affects *bhrajaka pitta* and through it the other form of pitta because karma of *bhrajaka pitta* is to regulate heat and temperature of skin.<sup>6</sup>
- Kapha - Marma therapy can be used to promote the circulation of prana or vital energy. *Marmas* are commonly connected to limbs, joints to have a special association with *sleshmakapha* because the seat of *sleshmakapha* is joints<sup>7</sup>

**Nadis** - In *ayurveda*, Nadis are pathways in which energy travel within tissue and run on each side of the body and connect with chakras in all over body. The traditional chakras system begins at the root of the spine and ends at the top of the head. So Energy flow through these nadis and regulate heat, temperature etc.<sup>8</sup>

So vata, Pitta, Kapha and nadis are connected with *marmas* where those are located in the skin and surface of the body. Therapeutic touch or massage in these areas distributes prana throughout the body, remove blockages, improve energy flow or tap hidden energy reserves and make connections with the greater power of life and nature.

### *Role of foot massage for eye sight promotor*

There are references about *Padabhyanga* in *samhitas* as a *dincharya* aspect and described its benefits:

- » *Charaksamhita-Drishtihprasadamlabhate*<sup>9</sup>
- » *Sushrutsamhita-Chakshuhyapadabhyangasadahita*<sup>10</sup>

Due to *Padabhyanga*, it reduces *padafutan*, *shrama*, *stambha*, improve eyesight.

- » In *Astanga Hridaya Uttar tantraacharya -vaghbhatta* has described effect of foot massage that 4 important nerves in the sole of the feet which are connected to the head because of heat, friction and excessive pressure on the feet, these nerves get affected as a result of which eyesight of a person gets reduced. After giving massage to the soles, a person never suffers from eye disorders.<sup>11</sup>
- » *Nadidarpan* - In *Nadidarpan* quoted that there are 10 nadis in head among which 2 are related to eyes. *Gandhari-Surrounds Ida nadi* which extends from *pada* and ends in left eye. *Hastijihwa-Surrounds Pingalanadi* extends from *pada* and ends in right eye.<sup>12</sup>

So our ancient acharyas described benefits of *Padabhyanga* to improve our vision and also told there link between *pada* and *netra*.

### *Modern point of view*

In modern point of view, the mechanism of Marma therapy underlying the effects of foot massage, may be explained by skin sensation of the foot after foot massage using pressure and increase local blood circulation, stimulates the somatosensory system including multiple receptors.

### *Foot massage*

Foot act like our internal radio, constantly transmitting information to our brain because the skin on our feet contains an extensive network of nerve endings, touch receptors and many other receptors are present.<sup>13</sup> In foot L4, L5, S1 dermatomes are also present. Dermatomes are the area of skin supplied by individual spinal nerves.

Spinal nerves help to relay information from other parts of the body to the central nervous system. So each dermatome transmits (for example pain, touch temperature) sensory details from a particular area of skin back to our brain.<sup>14</sup>

The nerve endings are stimulates the body promoting self healing by foot massage. In foot, kshipra, talhridaya etc. marmas are also contains nerves which can be correlate with these nerve endings.<sup>15</sup>

Previous studies have demonstrated that after foot massage, a significant increase in resting state alpha activity in the right and left posterior cingulate cortex along with somato sensory cortex, insula, thalamus, caudate and cerebellum.<sup>16</sup>

In brain, the sensory area is located in post central gyrus. It corresponds to areas 3,1,2 of brodmann. Among them, area 2 is concerned mainly with proprioceptive impulses.<sup>17</sup> Foot massage is stimulates the flow of vital energy to the brain in these areas and promote a healthful balance of the brain's processes.

Visual areas 17, 18, 19 are also concerned with vision are located in the occipital lobe that receives, integrates and processes visual information relayed from retina. These visual areas give off efferent fibers also and reach various parts of the cerebral cortex in both hemisphere. Like other sensory areas, the visual areas also connect with functionally related motor area.<sup>18</sup>

The motor area (mainly primary motor area 4 of broadman) is connected with the main sensory cortex. When these areas are stimulated electrically, movements occur in various parts of the body.<sup>19</sup> After received information in such areas, this process allows the brain to recognize objects and pattern quickly without a significant conscious effort. Cortical regions are free to perform computations such as those responsible for executive functioning and decision making.

As long as the recent study concluded that the positive effects of massage therapy on biochemistry have been proven through results of decreased levels of cortisol and increased levels of serotonin and dopamine. These hormones function as neurotransmitter chemical that relay messages between nerve cells in the brain and from neuron to muscles and help to co-ordinate movement, control mood and cognition.<sup>20</sup> Cortisol is a Stress hormone because levels of cortisol increase in the body during high stress situation, although sensation and dopamine known as the happy hormone which released into the blood stream when the body is

physically and mentally stressed and help the body natural reaction to received stress and relax the body. Dopamine is also vasodilator, so blood supply of the visual area can be increased and maintain eye health. So it can be possible that after foot massage, serotonin and dopamine release in the body as a happy hormone decrease stress and increase relaxation of eye muscles and eyes.

## CONCLUSION

Above discussion we find that Marma therapy is integral to all *ayurvedic* therapies from simple self-treatment to complex clinical procedure. Many types of Marma therapy have arisen that cover the entire range of natural treatment. In these types of Marma therapy, therapeutic touch or *abhyangas* the main method for treating marmas and Foot massage is the simplest method described by ancient Acharyas. A regular foot massage helps for promoting physiological as well as physical health. *Padabhyanga* can pacify doshas through the *siras* which reaches the eye there by nourishing, soothing and Prevention of eye disorders. In modern point of view it can be possible that different brain regions are activated by foot massage and releases neurotransmitters such as dopamine, serotonin which reflect different mechanism of different body region as well as eye region. Eyes become relax, healthy and prevent from diseases. So it can be concluded that Foot massage is *chakchushya* and beneficial for maintaining ocular health.

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