

Scientific Exploration Of Varma Therapy In Traditional Siddha System For The Management Of Pain

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ABSTRACT

India has been a cradle of martial arts that has been diffused to other parts of the globe as well. *Siddha* system is one among the traditional system of Indian medicine originated in Tamilnadu of South India. According to this system, the human body constitution is made up of three basic subtle components named as *Vatham*, *Pitham*, *Kapham*. These three components are altogether known as three humours (*Uyir thaathukkal*). The *Siddha* theory states that diseases are caused by the derangements one or more of these three humours. In that way the derangement of *Vatham* humour is responsible for pain related disorders. Though *Siddha* system has numerous internal medicines and external therapies to manage pain, *Varmam* is considered to be a unique martial art of pain management by stimulating *Varma* points (Vital points). These *Varma* points are interlinked with one another in the human body and the energy circulation between the *Varma* points are called as '*saram* (circulation of energy)'. Such aspects of traditional martial practices are not normally recognised by present day western scientific community, which tend to criticize them labelling as 'arts' or 'sports'. However, through this paper the very combination of medically relevant aspects of *varmam* for the management of pain has been scientifically explored. The study results revealed that upon carefully analyzing the *Siddha* literature, these *varma* points seem to correlate well with the physiological analgesic pathway of Brain opiate system claiming *varmam* as not only a complementary, but as the most decisive feature of *Siddha* system of medicine.

Key words: External therapy–*Varma* therapy–Indian medicine–Martial art–traditional medicine

1 INTRODUCTION

Varmakalai is 'the art (*kalai*) of the vital spots (*varmam*)' is regarded as one of the oldest South Indian Martial Arts which later evolved into a therapy. Since time immemorial it has been practised predominantly in Kanyakumari, the southernmost district of Tamil Nadu state of India. It combines therapeutic and combat techniques in a mutually enhancing, complementary fashion. It is therapeutically practised and taught by traditional health care specialists called

Asaan or *varma vaittiyar* [1]. From ages it has been developed and used as martial or defensive art and also used in medical healing practice. According to *Siddha* literature, *Varmam* therapy is considered as 'Vital points therapy' by which the diseases are healed by manipulating some pressure points either by touch or massage in an appropriate pressure. According to *Varmam sara nool*, human body consist of a vital energy circulation that passes continuously and transmits energy to the whole body. This circulation is called as '*Varma* energy circulation' (*Sara Ottam*) and the energy that passes through is called as '*saram*' or '*vaasi*' [2].

The places where the *vaasi* energy resides and activates both body and life-energy are *Varmam* points. *Thasanadis*

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are the ten sources of vital energy channels by which the energy circulation takes place [2]. The energy that passes will be retained, stored and transmitted in certain areas or points of human body and those points are called as ‘*Varmam points*’ or ‘Vital points’. These are explained in the lines of *Varmam odivu murivu sara soothiram* 1200 as, ‘*vaasi thattum idamellam varmam* [3]. The unique features of Varmam therapy is drugless, non invasive, cost effective and simple . It can be well utilized for the management of pain due to osteoarthritis, neurological weakness, neuromuscular problems, migraine headaches, convulsions, arthritis, spinal problems, muscle wasting and other intense pain. The therapy time is less and when properly complied to, gives long lasting results.

2 LITERATURE REVIEW

Varmam points are bio-energetic sites through which subtle vital energy flows and aid physiological functions of the body. These points are located in the junctions of nerves, Naadis (Ten vital energy sources), muscle and bones [4]. The energy has to be circulated uninterruptedly through the energy channels or *Thasanadis*. Any action that cause disturbance, alteration or blockage in energy circulation or varmam points leads to diseased state called as *varmam noi-nilai* [4]. The *Varmam* energy circulation takes place through *thasanadis* condense as three humors called as *Vatham*, *Pitham* and *Kapham* [5]. *Saram* is the deciding factor of *Varmam noi-nilai* (diseased stage of *Varmam*). This can be proven from the lines of *Siddha maruthuvanga surukkam*. According to Siddha theory, human body is composed of these 3 humours and the physiological functions of the body are carried out by these humours. If the energy circulation is disturbed, normal physiological functions get altered as explained in *Varmam Odivu murivu sara soothiram-1200* [6].

Etiology of Pain in Siddha

According to Siddha system alteration in *Vatha* humour is regarded as the predominant cause of pain. [7]. Nadis condense in vatham as *Idagalai*, *Pingalai*, *Suzhumunai*. If there is any alteration or disturbance in the passage of these *Nadis* or *Varma* points related to these *nadis* will eventually disturb *Vatha thathu* and will cause derangements in physiological functions of *Vatham*. Disturbance or blockage of *varma* energy circulation can be healed by *Adangal muraigal* i.e manipulation technique (*Varma ilakku muraigal*) or massage technique (*Varma thadavu muraigal*) are explained in many siddha classical literatures.

The art of Varma in Pain management

The two major classifications with respect to Varmam points mentioned in Siddha literature are Padu Varmam-12 and Thodu Varmam- 96 [8]. However, it is observed that thousands of Varmam points are mentioned in several literatures. *Varma Maruthuvam*, offer a wide range of therapeutics which basically consist of 3 specific techniques to

stimulate the Varmam points and adangal points (points where the pranic energy remains in abundance). Massage (Thadaval) , Tapping (Thattal) and Pressing (*Amarththal*) . The time taken for giving pressure on a *Varmam* point is termed as ‘*Kaala Kanakku*’ which differs from point to point and it is generally taken as $\frac{1}{2}$, 1, 2, 3 minutes. A wide range of ailments is addressed: from impact injuries and fractures to nerve-related problems, to countering unconscious states or treating cases of hemiplegia. Massage with medicated oils (*enney*) is, however, frequently administered to patients with tense body part, body aches, or in order to treat sprains, bruises or other injuries which frequently occur in the course of combat training. Medicated oils render the body supple, soft and flexible, straightening the nerves and activating the flow of *piranan* a kind of life force central to therapies and martial techniques. *Piranan* is the vital substance of life, but is also a primary diagnostic instrument of vital spot treatments. This root of human existence circulates via a system of channels through the body, the *Nadi* channels. If unbalanced, practitioners of vital spot medicine attempt to equalise the flow of *piranan* by stimulating *varmam* loci, which lie on *Nadi* channels and are therefore spots of concentrated *piranan* force [1] . Apart from these measures, *varma aṭi*, literally means “hitting the vital spots” that can happen during a fight or sports injury during which the “vital spot medicine,” include massages, setting of fractures, and emergency revival methods [9]. The following are the few among the Varma Points for pain management as shown in Table 1 .

Table 1. Anatomical loci and clinical significance of Varmam points [10]

S.No	Varmam	Anatomical Loci	Clinical significance
1.	Mudichu varmam	Prominence corresponding to C7 vertebra	Cervical pain
2.	Up-pukuttri Varmam	Situated 3 finger breaths above posterior aspect of the heel	Knee pain/ Lower limb pain
3.	Kuthikaal Varmam	Situated 7 finger breaths above posterior aspect of the heel	Heel pain/ Calcaneal spur pain
4.	Viruthi kaalam	Situated between big toe and adjacent in its dorsal aspect	Pain due to osteoarthritis, Varicose veins
5.	Komberi kaalam	Situated 8 finger breaths above medial malleolus	Lumbar pain
6.	Naai thalai Varmam	Situated 3 finger breaths below knee joint	Acute Knee pain
7.	Kaal moottu Varmam	Situated in centre of the popliteal fossa	Knee pain
8.	Kaakkattai	Supra clavicular fossa on both sides	Frozen shoulder pain
9.	Mudichu varmam	Prominence corresponding to C7 vertebra	Cervical pain
10.	Kondaikolli varmam	In the vertex of the skull	Head ache

Anatomical significance of brain opiate system [Figure-1]

Brain opiate system is the activation of analgesic system of brain by which the nervous signals entering the periaqueductal grey and periventricular areas can almost totally suppress the pain signals that enter through peripheral nerves [10]. Opiate receptor substances namely Endorphin, Enkephalin, Dynorphin are group of polypeptides which modulates the transmission of nerve impulses. They are also called as opiates as they have opiate like activity and inhibit the neurona involved in pain sensation [11]. Electrical stimulation either in periaqueductal grey area or in raphe magnus nucleus can suppress many strong pain signals entering by way of dorsal spinal roots. Stimulation of large AB sensory fibers from periphery tactile receptors can depress transmission of pain signals from body area. This presumably results from local lateral inhibition in spinal cord. Psychologist Ronald melzack and the anatomist Patrick wall proposed the 'Gate control theory' for pain in 1965 [12]. In order to explain the pain suppression. According to them, the pain stimuli transmitted by afferent pain fibers are blocked by gates in spinal cord i.e if the gates in spinal cord are not closed signals reach thalamus through lateral spinothalamic tract. Gating of pain at spinal level is similar to pre synaptic inhibition. It forms the basis for relief of pain through rubbing, massage techniques, application of hot or cold pack, touching, acupuncture and electrical analgesia stimulation. All these techniques relieves pain by stimulating the release of endogenous pain relievers [13]. mechanism by which analgesia is induced is through descending modulatory circuits, wherein numerous neurotransmitters, including serotonin (5-HT), vasopressin, oxytocin, adenosine, endocannabinoids, and endogenous opioids (EOs), have been shown to act on structures such as the rostral ventromedial medulla (RVM) and periaqueductal grey (PAG) in order to modulate nociceptive circuits and pain output [13–15] important to consider, is that the analgesic response elicited by human touch [16] is also mediated by EO and endocannabinoids. β -endorphins are EO peptides that have not only been shown to have a comparable analgesic effect to morphine [17], but are 18 to 33 times more potent [18].

Literature analysis on the analogy of Varmam energy circulation of Vatha nadi with brain opiate system

The condensation of the passage of energy channels of Vatham towards sahasara chakra closely resembles the brain opiate system (physiological pain pathway of brain) and the interesting fact is that both the energy circulation of *Nadis* and brain opiate systems are stimulated by touch or massage [15]. *Suzhumunai nadi* runs along the route of spinal cord from *mooladhara chakram* to *sahasara chakram*. *Idagalai nadi* which starts from left great toe emerges upwards touching all the Varma points of left side of the body cross the *mooladhara chakram* and goes right side of spinal cord and condense in *sahasara chakram*. *Pingalai nadi* passes in the opposite manner of *idagalai* representing as its mirroring appearance. The course of condensation of *Vatha nadis* resembles closely with the course of pain pathways. This can be explained in below lines of *varma beernangi*, [5] a *Siddha* literature on *Varma*.

Payindrathor kuthathinadi moolam patri
Surisaana pagangal maari maari
Suzumunaiyin rannodu nettit terem
Thirisaana thiruvanaikkal pole maari
Sirasalavu than mutti thirumba meendu
Virisana mooku nadup puravu netri
Meendume thirumbiyandha moolam pukkume'

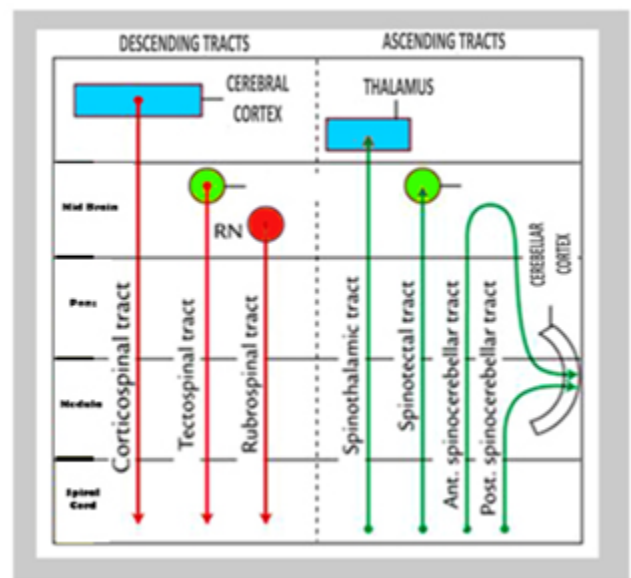


Figure 1. Ascending and descending tracts of the Brain-opiate system

3 CONCLUSION

This review has attempted to explore the pathophysiological aspects of ancient martial art *Varmam*, its relation with bio-energy transmitter pathways (*Naadi*), and the application of this art in therapeutics. The scientific analysis of the course of *Vatha Nadi* in terms of pain management and its correlation with brain opiate pathway, release of neurotransmitters on varma touch and massage such as including serotonin (5-HT), vasopressin, oxytocin, adenosine, endocannabinoids, and endogenous opioids (EOs), Opiate receptor substances namely Endorphin, Enkephalin, Dynorphin which modulates the transmission of nerve impulses and pain management have all been analysed. Therefore it can be well understood that varma could play a promising role in instant pain to chronic pain management in neuro-musculo-skeletal diseases and also in other ailments. The datas were collected from traditional paper manuscripts and printed books.

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Table 2. Analogy of Varma energy circulation of Vatha Nadis and brain opiate system

S.no	Varma energy circulation of Vatha nadis [5]	Course of brain opiate system including pain pathway[12]
1.	Payinrathor kuthathinadi moolam patri	Emergence of ascending pathway emerges and termination of descending pathway at spinal cord level
2.	Surisana pagangal maari maari	Ascending tract: Lateral spinothalamic tract has crossed fibers. Some of the fibers of lateral spinothalamic tract collaterals to form reticular formation in brain stem Descending tract: Efferent tract synapses with the afferent tract.
3.	Suzumunaiyin rannodu nettiterum	The ascending and descending pathways of pain runs along the lateral sides of spinal cord
4.	Thirisana thiruvanaikal pole maari	Ascending pathway send fibres to sensory cortex and limbic system Descending pathway receives fibres from cerebral cortex and hypothalamus
5.	Sirasalavu than mutti thirumba Virisana mooku naduppuruva netri Meendume thirumbiantha moolam pukkume	Ascending pathway terminates in sensory cortex and descending fibres in same spinal level

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