

Introduction

- g Ayurveda Marma Sastra
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INTRODUCTION

Ayurveda

Early reference of the word *Marma* is seen in *Atharva Veda*. During *vedic* period knowledge of *marma* was known to kings and warriors. It was applied in battle fields to hit and achieve maximum fatal effect against their enemies. Therefore it can be assumed that this science was used both in warfare and surgery.

An adequate knowledge of Anatomy and Physiology has been considered very essential for the exact study of surgical problems by Indian surgeons. During their study they found that injuries over certain parts of the body needed more attention and such areas were termed as *Marmasthanas*. *Charaka* says that those *vaidyas* who are well versed in Anatomy and Physiology of every organ will never commit mistakes in treatment due to ignorance.¹

Charaka in another context says that a physician can be said to know *Ayurveda* only if he knows each and every aspects of the human body.²

Susrutha says that, one could be called *visharada* only after he attains thorough theoretical and practical knowledge of the human body.³

The knowledge of *marma* is the existing clear evidence of the vast knowledge on Anatomy acquired by ancient scholars of Indian Medicine.

Etymology

Etymologically it is said that, each letter of the word *Marma* has got a significant meaning. *Ma* means *Prana* or *Vayu*, The *Repha* indicates house or seat. Hence the word *Marma* means Seat of *Vayu* or *Prana*.⁴ *Vaghbata* expresses the same idea.⁵

The term *Marma* is derived from the Sanskrit term *Mring marane*⁶ or *Mru prana tyage*. That which causes death or death like similar miseries.⁷ According to *Dalhana* the commentator of *Susrutha Samhitha*, *marma* is that which kills.⁸ The *Astanga Sangraha*, *Vahata* describes the *marma*⁹ as that particular part of the body that which is fatally vulnerable to injury.

Charaka says that the intensity of pain will be more on *marmasthana* when compared to the other parts of the body. This is because the *chetana* or *prana* is situated here.¹⁰

In *Raja nighantu* it is said *marma* is the *sthana* of life.¹¹ In Apte's Sanskrit English dictionary this word is explained as a vital point of the body.

Definition

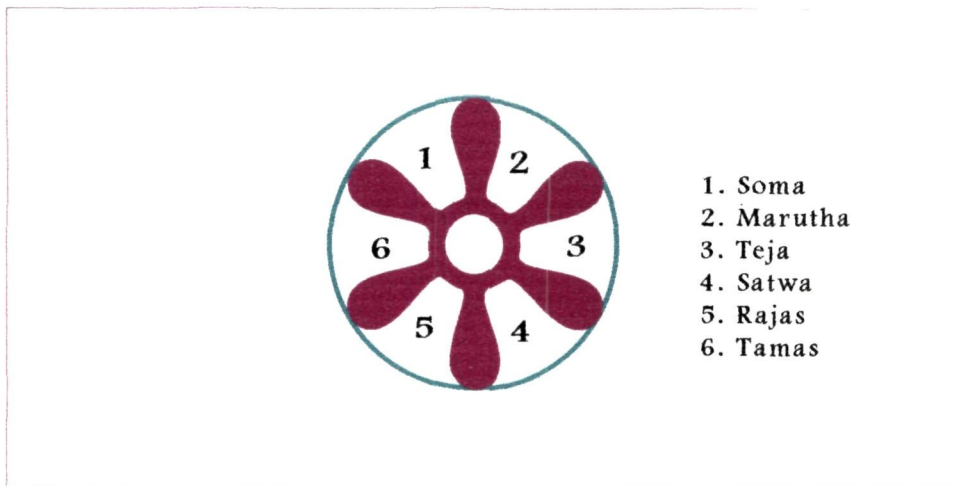
Vaghbata is of the view that structures which show irregular pulsation and where the pain on pressure persists can be labelled as *Marmasthana*.¹² He also opines that *Marma* is the place where *mamsa* (muscle), *sira* and *dhamani* (blood vessels), *snayu* (ligaments and nerves), *asthi* (bone) and *sandhi* (joints) meet.¹³

According to *Susrutha*, *marma* is a conglomeration of anatomical structures namely *mamsa* (muscle), *sira* (blood vessels), *snayu* (ligaments and nerves), *asthi* (bone) and *sandhi* (joints).¹⁴

The above statements clearly help in deriving a conclusion that there are certain very vital anatomical points in the body, which are having a secret and significant life values and they are composed of nerves, muscles, blood vessels, joints, ligament and bones. It is not necessary that all these structures should be present collectively at a time for the composition of *marma*. Even if only two structures are present it may constitute a *marma* point.

In another context, it is said that *marmas* are basically constituted by six vital elements namely *Soma*, *Marutha*, *Teja*, *Satwa*, *Rajas* and *Tamas*. *Marmasthanas* are the seat of *Soma* (*sleshma*) *Marutha* (*vatha*) *Teja* (*pitha*) and the three mental forces - *Rajas*, *Tamas* and *Satwa*. Other than these the supreme power within the *marmasthana* is *Bhutatma*. This is the force which controls the body and mind.¹⁵

Figure No. 1



Sakthi is *chaithanya yukta* and *niradhara*. *Jada* is *pravarthana rehitha* but *adharayukta*. Combination of both results in life.

Due to the combination of *Satwa* and *Jada*, there will be certain place where it is termed as

Pranayatanakendra. In these places, the *prana* circulates more, and hence termed as *marma*. When injured the *doshas* get vitiated in the surrounding areas of the *marma*. This aggravated *dosha* which is mainly vatha produces severe pain in the body and also produce blockade of free movements of *Prana* and *Vyana Vayu*. This *Vyana vayu* regulates the free motion of nutrients to all the tissues of the body. When this gets blocked all the systems suffer due to the lack of nutrition and free flow of *prana*. This is disease.

Importance of Marma

In Ayurveda the knowledge of *marma* has a very vital role to play. The disease affecting these areas were considered to be having a very bad prognosis. More over the disease not affecting the *marmapradesha* are relatively easy to cure.¹⁶

Susrutha opines the disease affecting the *marmasthana* are comparatively difficult to cure. It can be cured with much strenuous effort.¹⁷

Marmasastra was enumerated for the benefit of patients who undergo *Salyachikitsa*. The surgeons are advised not to disturb any *marma* or rather, protect even the neighborhood *marmasthana*

from blunt or sharp instruments and also the *kshara* (caustics) or *agni* (cautery) for the successful completion of surgery. If by any chance these *marmasthanas* were disturbed by any of the instruments, the patient probably dies or may be deformed even if he survives.¹⁸

The dimension of *marmas* were elaborated to make the surgeon aware of these structures and to avoid being hurt during surgery.¹⁹

The life of the patient is not to be despaired of even in the case of fracture or crushing of a bone of the *Kosta*, *Sirah* and *Kapala* or perforation of the extremities, if the local *marmas* are not hurt. Recovery is common in cases of cuts in the *Sakthi*, *Bhuja*, *Pada* and *Kara*, even when the whole limb is found to be severed, if the *marmas* are not in anyway connected.²⁰

A proper knowledge of the structure, dimension, lesion or injury and location contribute much to the perception and practice of *Salyatantra*. Hence medical authorities have described the *marmas* to have covered half the scope of *Salyatantra*.²¹

The *marmas* were considered *Madhyama rogamargas*.²²

- ◆ From the above it could be summed up as follows.
- ◆ The knowledge of *marmas* is so much merged in *Salyatantra* that it is considered as half the part of *Salyatantra*.
- ◆ They are the conglomerating point of the five elements *Pritvi, Ap, Teja* or six structures, *Mamsa, Sira, Snayu*.
- ◆ It is described to know the signs and symptoms produced by any injury on this.
- ◆ These structures with its neighbourhood should be strictly avoided during surgery.

Enumeration of Marma by different Authors

Agnivesha (3000 BC) realized the presence of 107 vital points in the body. *Charaka*, his disciple, and the renowned physician, though acknowledges 107 vital points gave importance to only three *marma* points in the body. They are *Siras, Hridaya* and *Vasthi*. *Susrutha* described 107 *marmas*. *Vagbata* has also enumerated 107 *marmas* in his text. There is a slight difference in classification and measurement of *marma*. *Sarangadhara* has just repeated the same. *Bhavamisra* accepted *Susrutha's* theory.

Recently the following authors did some useful work on *marma*.

1. Krishna Rao P.V.
2. Varier P.S.
3. Rama Raksha Pathak
4. Damodar Sharma
5. Guru L.V.
6. Chandrasekharan Nair K.A.
7. Acharya S.H.
8. Avinash Lele and others

Measurements of Marma

Figure No. 2

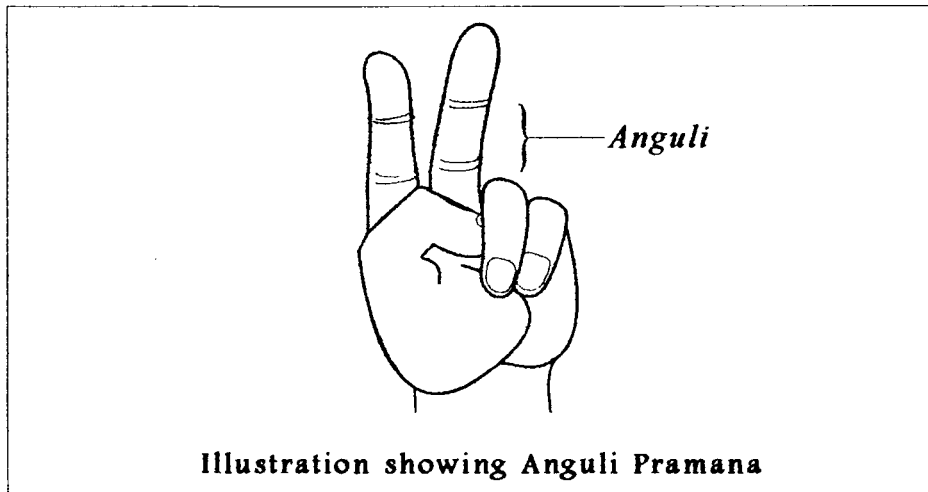


Illustration showing Anguli Pramana

In olden days when these vital points were located and tabulated there was no universally accepted unit for measurement. Hence they developed *Anguli Pramana* or body inch. Here *anguli* is the distance between the middle two creases of the middle finger or the breadth of the middle and the index finger in horizontal position.

Anguli pramana of *pravistara* (surface area) of each *marma* has been measured by ones own finger breadth *Swanguli pramana*.

How does Marma therapy work

According to another Indian philosophy human body is governed by life force *Prana*. The prana consists of two dynamically opposite yet harmonizing energies called *Ida* and *Pingala*.

Ida signifies the female or the negative energy, while *Pingala* signifies the male or positive energy. In healthy condition the *Ida* and *Pingala* are in perfect balance. Any imbalance between the two is disease. Through proper treatment this balance is regained effecting cure.

There are two currently favoured explanation as the mode of action.

1. Neuro Endocrine Theory

Western medical science believes that due to pressure over these points certain chemical substances and neurotransmitters are released (like endorphins, enkephalin.) which pass nerve impulse to the brain to bring about the desired effect. Endorphin is a protein molecule with very powerful

pain killing capabilities. It is released by many parts of the nervous system and is also related to the glandular or endocrine system hence the name Neuro endocrine.

2. The gate control theory of pain

Nerve fibres are like large bundles of cables of various sizes, some thick and some thin. The thin fibres transmit the sensation of pain whilst the thick ones carry the sensation of touch. It has been found experimentally that if the impulse transmission in the thick fibres can be increased, this selectively blocks the conduction in the thin fibres by closing the gate consisting of specific nerve cells in the spinal cord.

3. Other Theories

The very small electrical changes that occurs at the *marma* point is found to be capable of producing effects far in excess of the tiny electrical change at the point responsible for triggering these effects. This is new area of research.

It is now known that these *marma* points are areas of low skin resistance, which means this areas conduct electricity better than the surrounding areas.

With the aid of certain highly developed camera to study halo - it is under study that the halo is present above this *marma* points. Preliminary study states that this halo consists of charged particles called ion. In some cases they are predominantly negative and some are predominantly positive.

Marmabhighatha Samprapthi

Each and every disease has got its own *samprapthi*. The study on the mechanism of the manifestation of disease is *samprapthi*. Even a slight discomfort either physical or mental has got its own reasons. Disease is a derangement of the physiological systems. It is the ultimate outcome manifested as a result of derangements or physiological processes caused by the different *nidanas* undergone by the individual. According to *Ayurveda*, *doshas*, *dhathus* and *malas* are the fundamental factors which conduct the whole physiological processes of the body. It has already been mentioned that severe pain, deformity, or death will be resulted due to injuries on *marmas*. For such fatal result also, there should be some minor or major impairments in the physiological process. According to *Vagbhata* and *Susrutha* the seven hundred *siras* in the body which are classified into

four as *Vatha*, *Pitha*, *Kapha* and *Sudhasonitha-vahisiras* nourish the whole body and they are said to be circulating all over the body centralizing on the *marmas*.

Therefore the injuries to the *marmas* will cause trauma to the *Siras* (blood vessels) resulting in sudden *rakthasrava* (hemorrhage). It is a fact that the nourishment of the whole body is through *raktha* (blood) and loss of blood due to the injuries results in *dhathukshaya*, causing the vitiation of *vatha*. The vitiated *vatha* causes severe pain and also the vitiation of other *dosas*, mainly the *pitha*. As a result of the vitiation of *pitha* thirst, dryness, giddiness, vertigo, perspiration and relaxation of joints occur. This results in the failure of the vital functions of the body causing death.²³

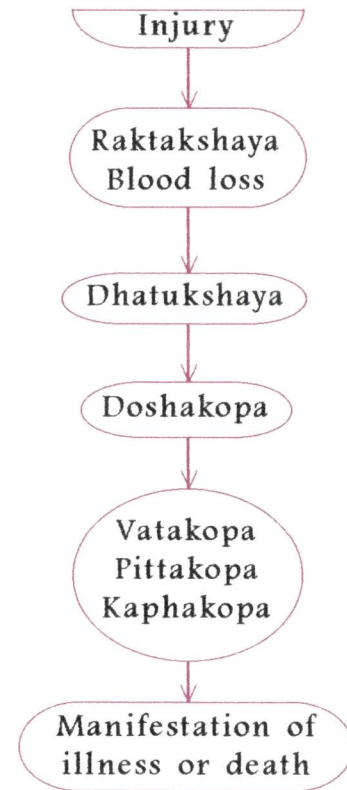
Susrutha does not mention the vitiation of *pitha*. He observes that the four types of *siras*, being centralized on the *marmas* always nourishes the *snayus*, *asthis*, *mamsas*, *sandhis*, the ultimate result of these factors is the total nourishment of the body.²⁴

Though the *siras* are classified into four as *vatha*, *pitha*, *kapha* and *sudha sonitha vahees*, it is nothing but the *vatha* which conducts the circulation

of blood in the whole body.²⁵ The *vyanavayu* being seated in the *hrdaya* conducts the circulation of blood all over the body. So whenever there is disturbance in the circulation, naturally the *vatha* will vitiate. The same thing will happen in *marmabhighatha* also. When the *marmas* are injured, loss of blood occurs along with the vitiation of *vatha*. The vitiated *vatha* causes excruciating pain, and the patient becomes unconscious due to this and as a result of the failure of the whole system the individual dies.

From the detailed description above it can be enumerated that the mechanism of fatal effects of injuries to *marmas* are as under :-

1. Excess loss of blood due to *kshata* of blood vessel.
2. *Dhatukshaya* due to *Raktakshaya*.
3. *Vatakopa* due to *dhatukshaya*.
4. *Pittakopa*.
5. Manifestation of symptoms or death.



From the above it could be understood that shock is the main cause of death.

Shock is explained as a peripheral circulatory deficiency or anoxaemia. It is of two types namely primary shock and secondary shock. The primary shock is a neurovascular reaction, syncope or fainting which develops immediately after some injury and is usually transient. Secondary shock does not occur immediately after some injury, but is a type of circulatory failure due to agony and abnormal permeability of capillary wall, Anyhow, shock is the result of circulatory deficiency. *Vagbhata's* illustration, that the injuries to blood vessels being on the *marmas* cause excessive loss of blood resulting in *dhathukshaya*, is the apt comparison to the condition of shock.

Samanya Lakshanas of Marmabhighatha

It has already been mentioned that there are 107 *marmas* in the human body. These are classified into several groups, which will be dealt later. The symptoms of injuries on each *marma* have been described in detail in the *Samhitha grandhas*. Furthermore, the symptoms on injuries to the different *marmas* such as *mamsa marma*, *asthi marma*, are also

described in the *Samhitha grandhas*. There are certain general symptoms as *brema* (giddiness), *pralapa* (delirium), *patana* (falling down), *pramoha* (unconsciousness), *vichostanam* (abnormal movements of the body), *Samleena* (semiconsciousness), *ushnatha* (rise of temperature), *srastamgatha* (relaxation of joints), *moorcha* (fainting), *oordhavatha* (belching), *ruja* (pain) and different *lakshanas* due to the vitiation of *vatha* will be manifested due to the injuries in any of the five type of *marmas*. Moreover, there will be bleeding where the blood will be like a fluid washed with *mamsa*, observing capacity of *Indryas* also will be lost.²⁶

Vagbhata also describes certain general symptoms manifested on injuries to *marma*. He says that *deha prasupthi* (numbness of the body), *gurutha* (heaviness), *moha* (unconsciousness), *seethakamitha* (likeness of cold), *sweda* (perspiration), *moorcha* (fainting), *vami* (vomiting) and *swasa* (dyspnoea) are the symptoms of injury to *marmas*. Along with the above mentioned general symptoms particular symptoms related to each *marma* which is injured can also be seen.²⁷

Prognosis

A *Marmabhighatha* in which frequent *vikshepa* (convulsion), *brisamsadanam* (extreme weakness), *soonyatha* (loss of sensory observations), *brema* (vertigo), *vepanam* (shivering), *oordhaswasam* (severe dyspnoea), *srastangatha* (fatigue), *hrdaya dahyatha* (burning sensation in the chest) are observed and the patient will feel no relief from symptoms at any stage, may probably die.

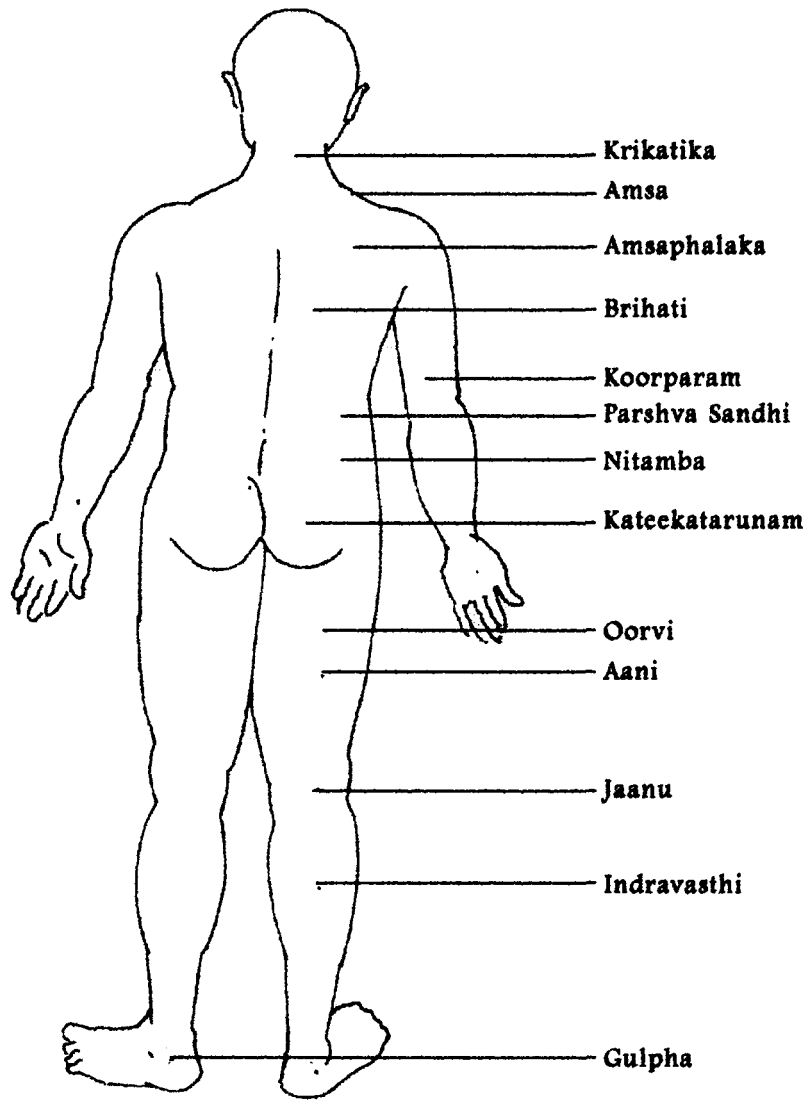


Figure No. 3

Ayurveda Marmas I

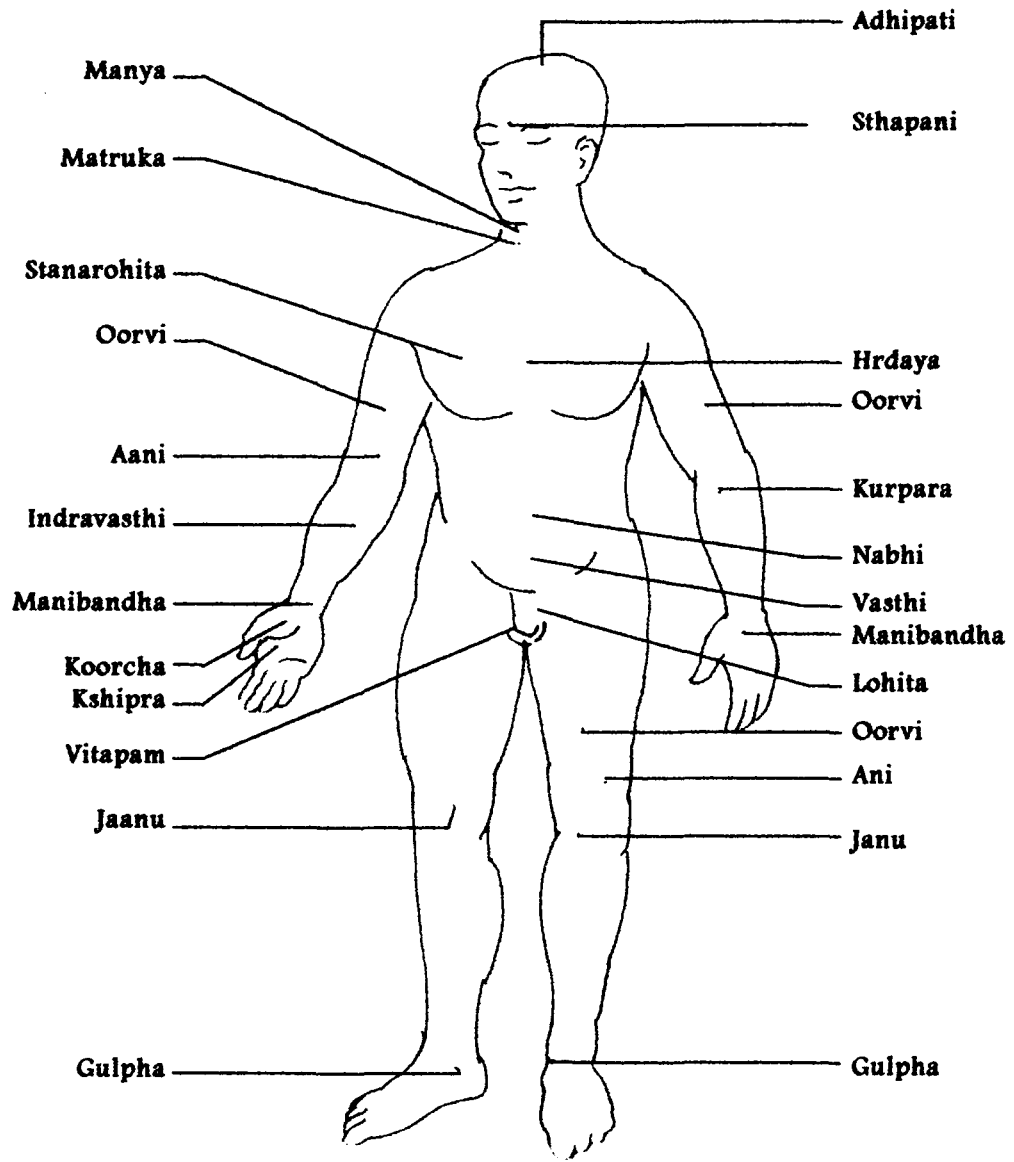


Figure No. 4

Ayurveda Marmas II

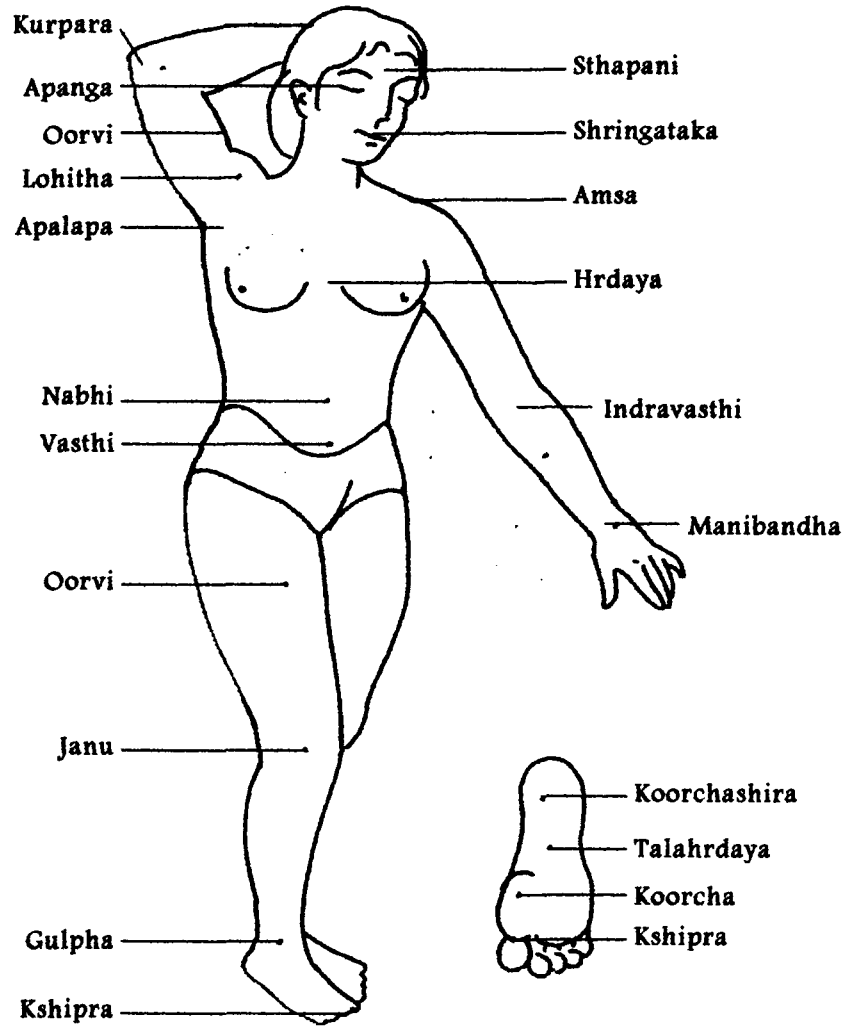


Figure No. 5

Ayurveda Marmas III

An Outline of Tamil Marma Sastra

The use of metals, minerals and particularly mercury in medicine was an ancient practise in India. And this was a part of *Tantrik* legacy inherited by *Ayurveda*. This legacy is conspicuous in the so called *Sidha* system of medicine, which is now prevalent mostly in Tamil Nadu.

An old system dating back to the prevedic period and strongly *Tantrik* in orientation, it got mixed up with the cult of the nine million *sidhas* (nava koti sidhars). The *Sidhas* who supposedly defied death preached a philosophy of transmuting the gross physical body composed of impure matter (*asudhamaya*) to the refined body of naturally pure matter, thereby rendering the body immutable and free from disabilities and limitation (*Pranava Tanu* and *Baindhava Tanu*). Liberated while alive (*Jeevanmukti*), the person who is possessed of this refined body, transact freely with the world of impure matter as well as the world of pure matter and is distinguished by the skills (*Sidhis*) that facilitate these transactions.

In *Tamil Sastra* there are one hundred and eight *marmas* and the word *marma* is usually connoted as *Varma*.

Historians classify ancient Indian physicians as belonging to two sects. (i) The *Saiva* sect (ii) the *Vaisnava* sect. The *Saiva* sects comprising the early *dravidians* held *Lord Siva* to be the repository of all knowledge. The eighteen *Sidhars* including the great *Agasthya Maharshi* belong to this clan. The *Vaisnava* sect comprising the early *Aryans* hold *Lord Brahma* to be the repository of all knowledge. *Atreya* school, *Dhanvanthiri* School, and *Bhaskara* School of thought belong to this sect. The *Dravidians* had their own systems of *Dhatu chikitsa* and *Marma chikitsa* which they practised and developed. From the very early days the *Nadar* castes along with the *dravidian* rulers, who were responsible for territorial integrity and defence, were considered the sole masters and propounders of *marma vidya*. To these people who were always engaged in bodily combat and warfare, the knowledge of the *marmas* was very much essential.

History of Varmam

There are various stories regarding the origin of varma. One story goes like this. Lord Siva and Goddess Parvati happened to see a hunter lying unconscious after a fall from a tree. The Goddess pleaded with Lord Siva to awaken the fallen hunter.

In response to her request the lord touched the wounded hunter with a stick and chanted a *Mantra* over him. Parvati then sprinkled some water on the hunter's face and he immediately regained consciousness.

The eighteen sidhars of Tamil tradition are as follows 1. *Agasthya (Agattiar)*, 2. *Thirumoolar*, 3. *Bhogar*, 4. *Gorakkar (Gorakshanadhar)*, 5. *Sattai muni*, 6. *Nandeesar*, 7. *Konkanar* 8. *Kamalamuni*, 9. *Idaikkadar*, 10. *Sundarandar*, 11. *Roma muni*, 12. *Brahma muni*, 13. *Maccha Muni*, 14. *Varaha muni*, 15. *Kurma muni*, 16. *Punnakeswar*, 17. *Kailasanadhar* and 18. *Kunkannar* (cf A.V. Subramania Aiyar - The poetry and philosophy of *Tamil sidhas* 1957 page 72). It is however doubtful if all these are historical personages.

Among the rishis, *Agasthya Maharshi* with a number of classical treatises on *marma* to his credit, is the first and foremost. He is supposed to have lived during the time of Lord Rama in the *Agasthyakootam* mountains a little to the northeast of the present Neyattinkara taluk of Trivandrum district.

Some opine that *Agasthya* was an *Aryan* sage who had migrated from the Himalayas and did his life work in South India (present day Tamil Nadu.) It is also said that he had established a centre in the Sidha koota

hills in present day Tirunelveli. *Rishi Agasthya* is considered as the father of *marma chikitsa*. The works and teaching of *Lord Agasthya* and his predecessors were said to be *Munnool*. The literature and teachings thereafter is termed as *Pinnool*.

An important Tamil work on which the sidha physicians mainly rely even now is ascribed to this sage *Agasthyar* namely *Agattiyar Charakku*.

In the classical list of *sidhars* the second important personality is that of *Bhoghar*. He is said to be a pre Christian Taoist Chinese, who came to India and settled down on the *Pazhani hills* in Tamil Nadu.

Another Chinese who accompanied him and became the authority on medical alchemy here in Tamil nadu is known as *Pulipani*. Besides these three, the name of *Thirumoolar* whom tradition assigns to 3000 B.C.(?) is associated with the founding of the *Sidha* school.

Table No. I

No.	Name	Birth	Star	Kaal	Age	Decade	Samadhi
1.	Nandeeswar	Vaikasi	Visakam	04	680	03	Kailasam
2.	Thirumoolar	Karthikai	Poosam	03	200	27	Chidambaram
3.	Agasthiyar	Margazhi	Aayilyam	03	4 Yuga	48	Ananthasayanam
4.	Sattaimuni	Aavani	Maheeram	04	660	08	Seerkazhi
5.	Karuvoorar	Chithirai	Ashtam	02	300	42	Thanjavur
6.	Pulasthiyar	Aavani	Anusham	04	660	08	Papanasham
7.	Korakkar	Karthikai	Aayilyam	01	080	11	Thirukona malai
8.	Kamalamuni	Vaikasi	Poosam	02	4000	12	Thiruvaroor
9.	Pampatti	Karthigai	Maheeram	03	163	04	Marutha malai
10.	Edaikkadar	Purattassi	Thiruvathira	02	100	18	Thiruvannamalai
11.	Siva vakkiar	Thai	Maham	02	81	20	Kumbakonam
12.	Konkanar	Chithirai	Uthradom	02	1200	11	Thirupathi
13.	Bhogar	Vaikasi	Bharan	02	300	18	Pazhani
14.	Machamuni	Adi	Rohini	01	300	62	Thirupparankundram
15.	Punnakesar	Vaikasi	Chithirai	02	112	18	Changanassery
16.	Kalangi	Chithirai	Aswathy	04	3000	10	Kanchipuram
17.	Sundarar	Avani	Revathy	03	800	28	Madurai
18.	Theraiyyar	Pankuni	Moolam	02	700	90	Pothigaimalai

The method of description of each *varma* in *Tamil marma sastra* is characteristic. The location of *varmas* are mentioned along with the different symptoms of the injuries. The different techniques applied to relieve the symptoms are dealt in detail. The description of drugs like *thailams*, *grithams* etc. are also given. *Adankal* the most important *marma vignan* are techniques to relieve emergency symptoms of *marmabhigatha*.

The techniques are usually strikes, hits, blows or presses to certain particular locations in the body.

- ◆ These vulnerable points are not visible as they lie beneath the skin. The word *varmam* also means that which remains hidden.
- ◆ The points at which these structures lie intertwined are not visible and are located only at a few points.
- ◆ These points are so finely placed that all cannot locate and identify them easily.
- ◆ Injury to these *varmas* cause severe pain and affects the normal functioning of the body.
- ◆ The how and why of various symptoms that results have remained a mystery. Hence the name *Varmam*.

In Tamil words like *Vasi, Purani, Kattu, Ouirmayka, Prana, Kala, Choka, Saram, Yoga, Param, Idam, Sutcham, Edu, Adavu* and *Siras* are used as synonyms of *varma*.

I. The main causes for the impact of the nerve centres.

1. Fall from a tree or height.
2. Fall while running.
3. Impact of a stone thrown at a high speed from a sling.
4. Hit sustained by a thick and rough stick (cudgel).
5. By leaping.
6. Swooning by excessive sex.

II. Contributory Factors

- a. Fall in a disorderly / zig zag manner.
- b. Massaging the body in a excessive way (*Mattirai*) than that is optimum.
- c. Impacts caused by the body thrown due to lack of balance.
- d. Lifting heavy weights while holding the breath.
- e. Pain from catch and cramps.
- f. By fighting particularly with strong persons.

III. General Signs and symptoms

- i. The eye balls roll
- ii. The black pupils appear white.
- iii. Janni (Convulsions/? Delirium) with hiccup will occur.
- iv. Breathing with difficulty.
- v. Swelling in the lower part of the abdomen.

Mathirai

The quantum of measurement of impact to nerve centre is known as *mathirai*.

Adankal

Different authors have different views regarding the *adankals*. While one considers the *adankal* as those maneuvers usually administered to relieve the symptoms of *varmabhighatha* like unconsciousness, shivering, protrusion of tongue, convulsions. Some are of the opinion that they are also certain vital points where *Prana* stays and could be stimulated for reviving the injured persons. The peculiarity of these structures is that they are deeply seated in the body and cannot be injured very easily. In case of injury they will create only serious complications.

There are fifty one such *adankals*. Out of these thirteen are widely used.

adankals.

Vay ulla adankal	2
Unnakkin adiyil	2
Alavil	2
Alavadi puttukal	2
Mun Nadikkul adankal	2
Kural Valayin mathiyathil	1
Mundelumbin adiyil	2
Mathipathil adankal	1
Mathipathil keezhil	2
Poruthil	1
Athan keezhu	1
Pin adankal	1
Nanguna mudichi poottu	4
Thodayin pinpakkam	2
Ullankalil	2
Sakthi adankal	2
Ullankai adankal	2
Purankalil adankal	2
Kavali adankal	2
Munkalil mannai adankal	1
Thudai naduvil pinpakkam	1
Varpoottu adankal	2
Kaiyin adikuzhiyil adankal	2
Peruviralin adankal	2

Kazhuthukkul adankal	4
Muthuku naduvu Mel	3
Chuzhi madakkil	1
Chenni kuzhiyil	2
Uchiyil	1
Piranthalayil	1
Sarvanga adankal	1

General Adankal Methods

The injured should be handled with care and gentleness.

- ◆ He should be lifted and made to sit.
- ◆ Massage mildly on the chest and back.
- ◆ The rib cage is made to expand well by extending both the hands.
- ◆ Stretch the nerves.
- ◆ Massage with feet.
- ◆ With the right hand, massage right side and back.
- ◆ With the left hand, massage the left side and back.
- ◆ Holding at the occipital region with the both hands pressing the thumb at the depression on both the sides the head is moved upwards and downwards to the front and back three times. (*Odimirivu 180*)

There are certain separate and special adankal for certain specific *varmas* as well.

Adankal for Thilartha varma

The injured should be lifted by the hair and made to sit and mild blows should be given on the head. The neck should be rubbed continuously. He must be hit on the chest with one hand.

In case of injury to the *Natchathira kalam* the patient is made to sit. The opposite *varma* is massaged gently and a blow is given over the head. *Chevikutty varma* is revived with holding the head with one hand and stimulating the other side *varmam* and later giving a blow over the head.

Pidari varma is revived on hitting on the head and shaking. If the opposite *Urakkakalam* is massaged for two spans, then shake the body gently massage the whole body then *Urakkakalam* can be revived.

Urumi varma is stimulated by tapping the back bone and gently massage the front.

Valia attisurukki is revived with tapping with the tip of the foot over the back and head and

shaking them. *Seriya attisurukki* is also stimulated similarly by massaging over the back and both the sides of the body.

Kallidai kalam injuries are revived with the patient made to sit and massaged over the back and bringing the stroke downwards and gently pressing over the perineum.

The Concept of Amritakala

The concept of *Amritakala*, is one of the peculiar theories of *Varma chikitsa*. It might be very difficult to understand this with a rational mind. Here just like the moon playing a very important role during the high tide and low tide, it is said that it plays a very important role in human body. That might be reason for the aggravation of certain disease during certain seasons.

There are thirty locations all over the body where the *amritakala* travels depending upon the waxing and waning of the moon in the sky. The *amritakala* starts from the right for males and from the left for females.

- 15th Day pineal body
- 14th Eyebrows.
- 13th Day eye.
- 12th Day nose.
- 11th Day left ear.
- 10th Day mouth.
- 9th Day throat.
- 8th Day upper chest.
- 7th Day left chest.
- 6th Day navel.
- 5th Day genital organs.
- 4th Day thigh.
- 3rd Day under the knee.
- 2nd Day left foot.
- 1st Day left toe.

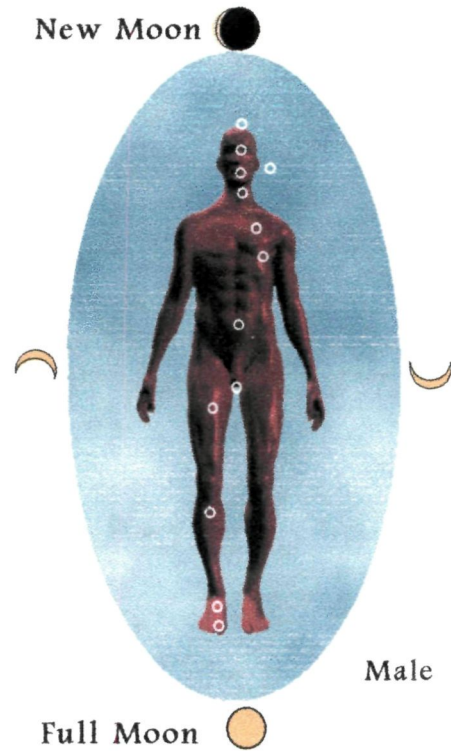


Figure No. 6

Sadhyasadhyatha

1. Abnormal Sweating Starts.
2. Temperature falls.
3. Four *Uyir kalai* namely Cornea, Semen motion and Urine is examined in detail.
4. Eye ball bulges and watering of eyes
5. Ejaculation.
6. Involuntary passing of Urine and motion. With these symptoms prognosis is really grim.

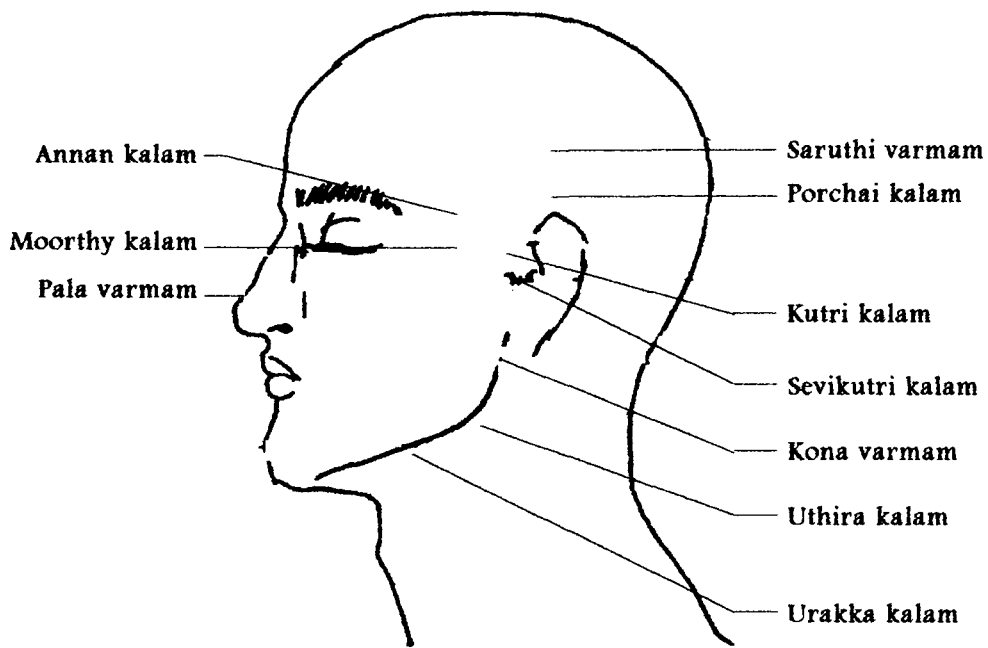


Figure No. 7

Tamil Marmas I

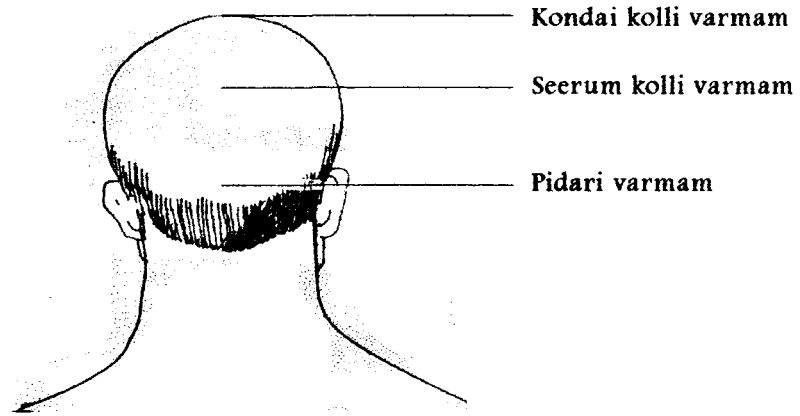


Figure No. 8

Tamil Marmas II

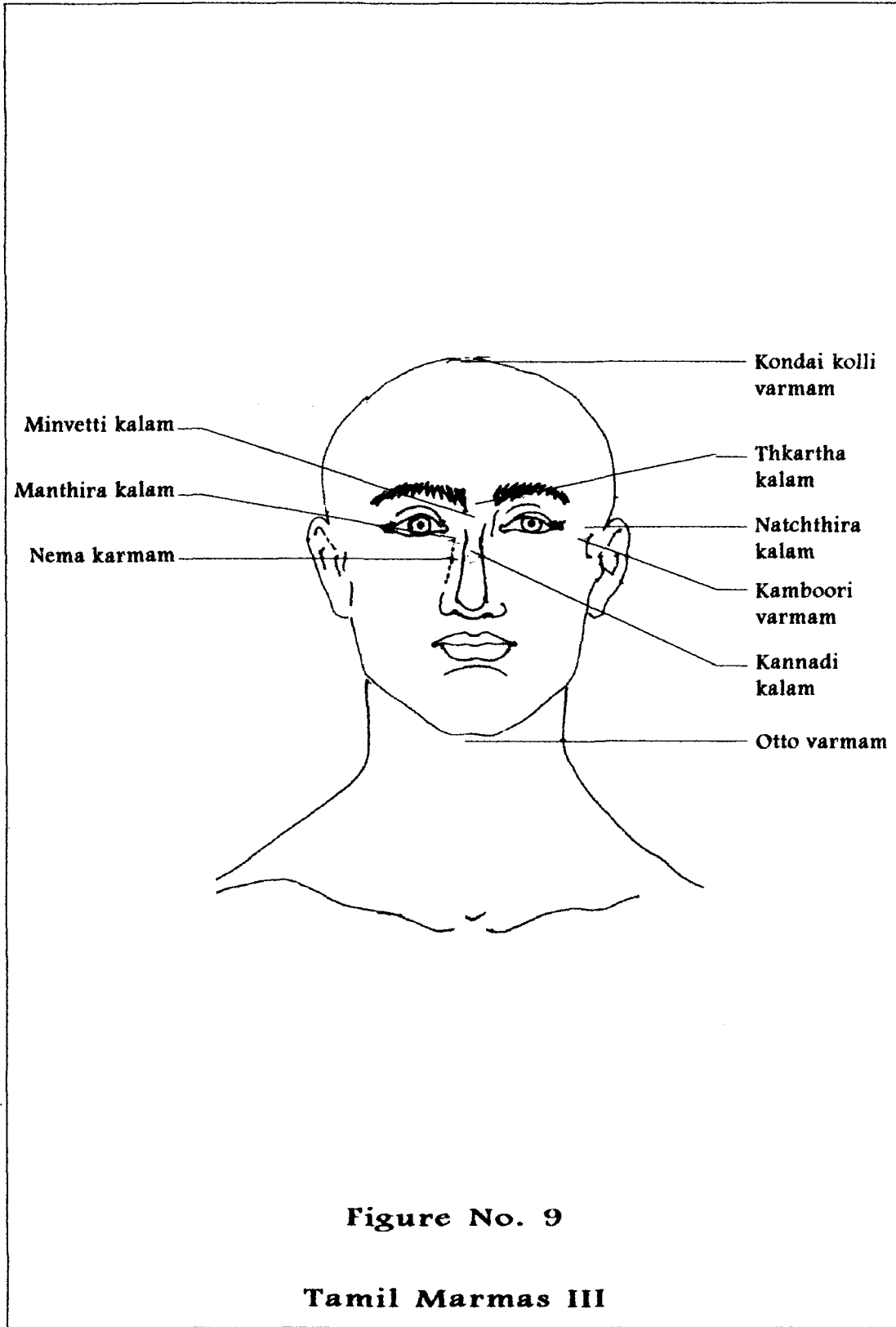


Figure No. 9

Tamil Marmas III

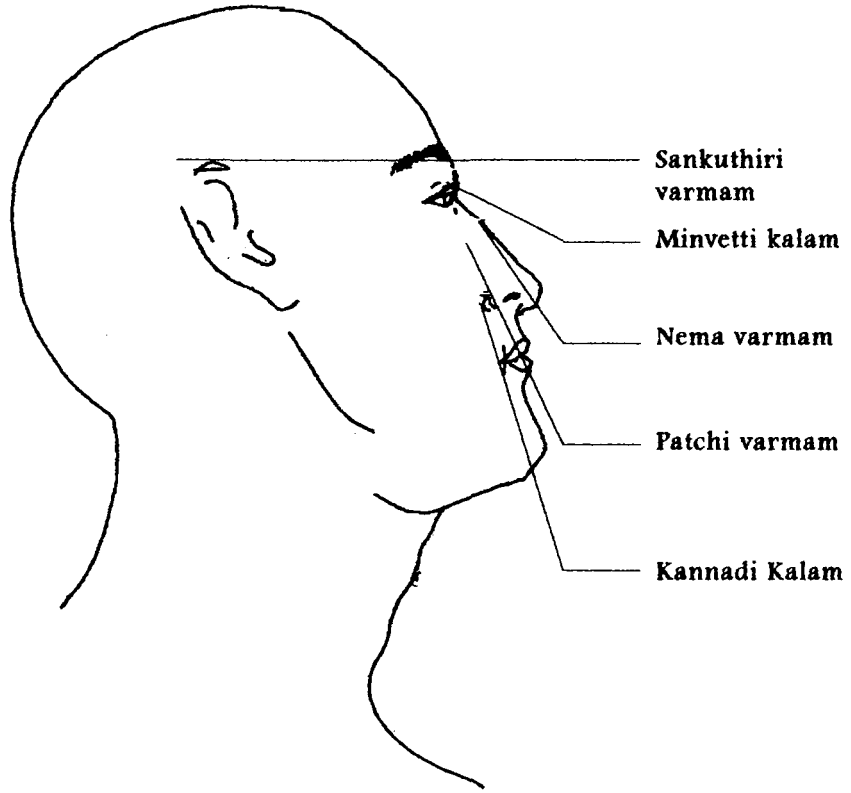
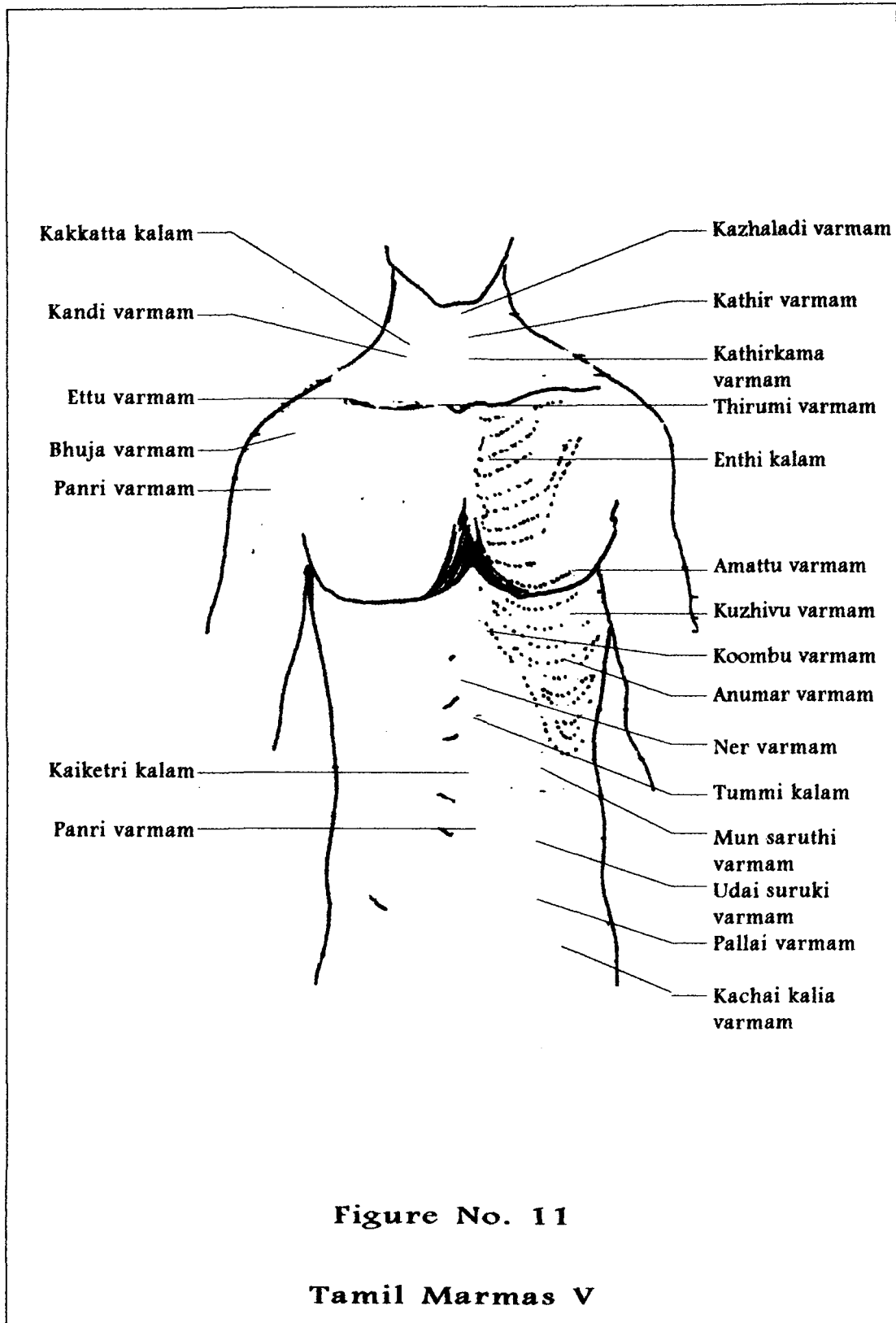
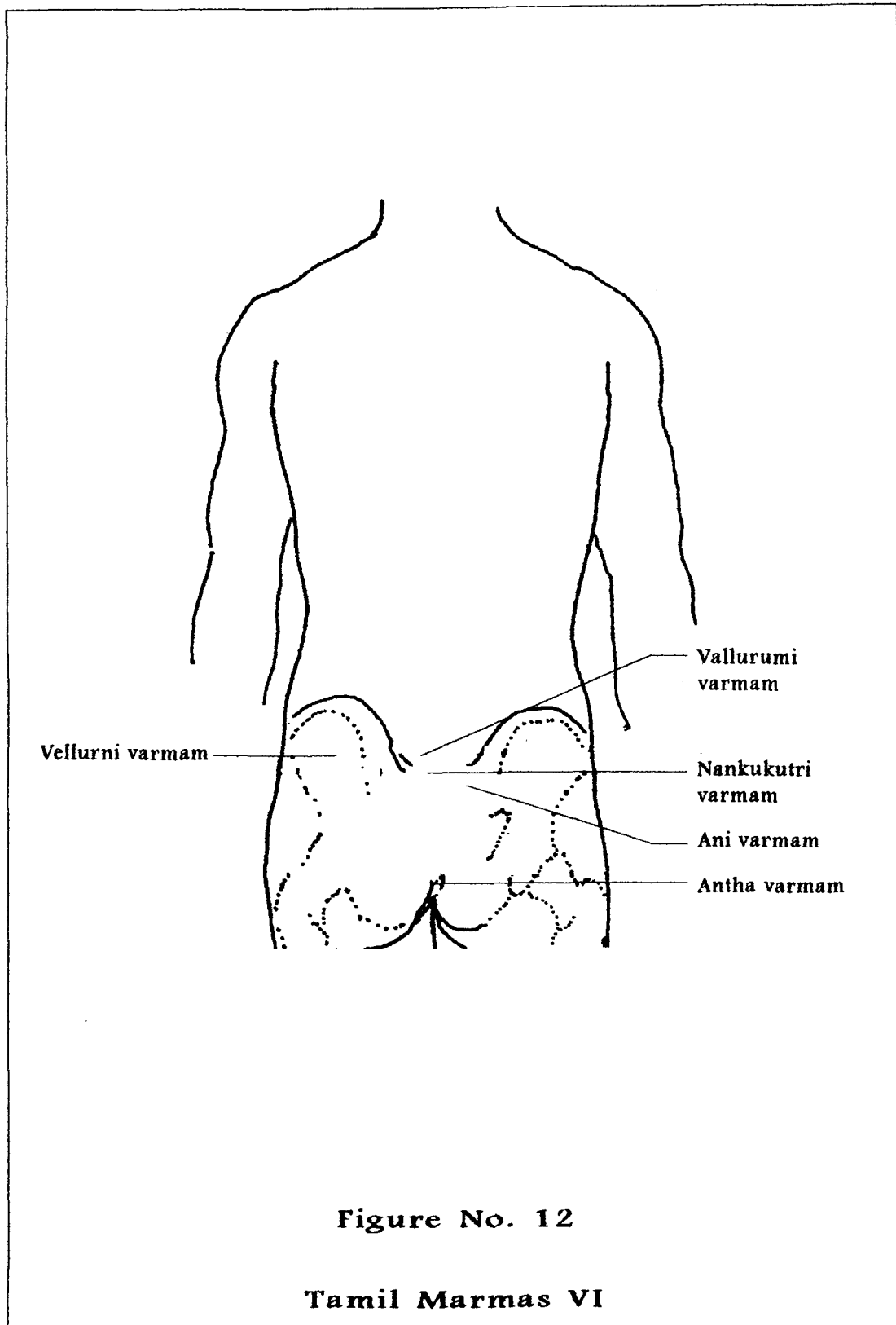
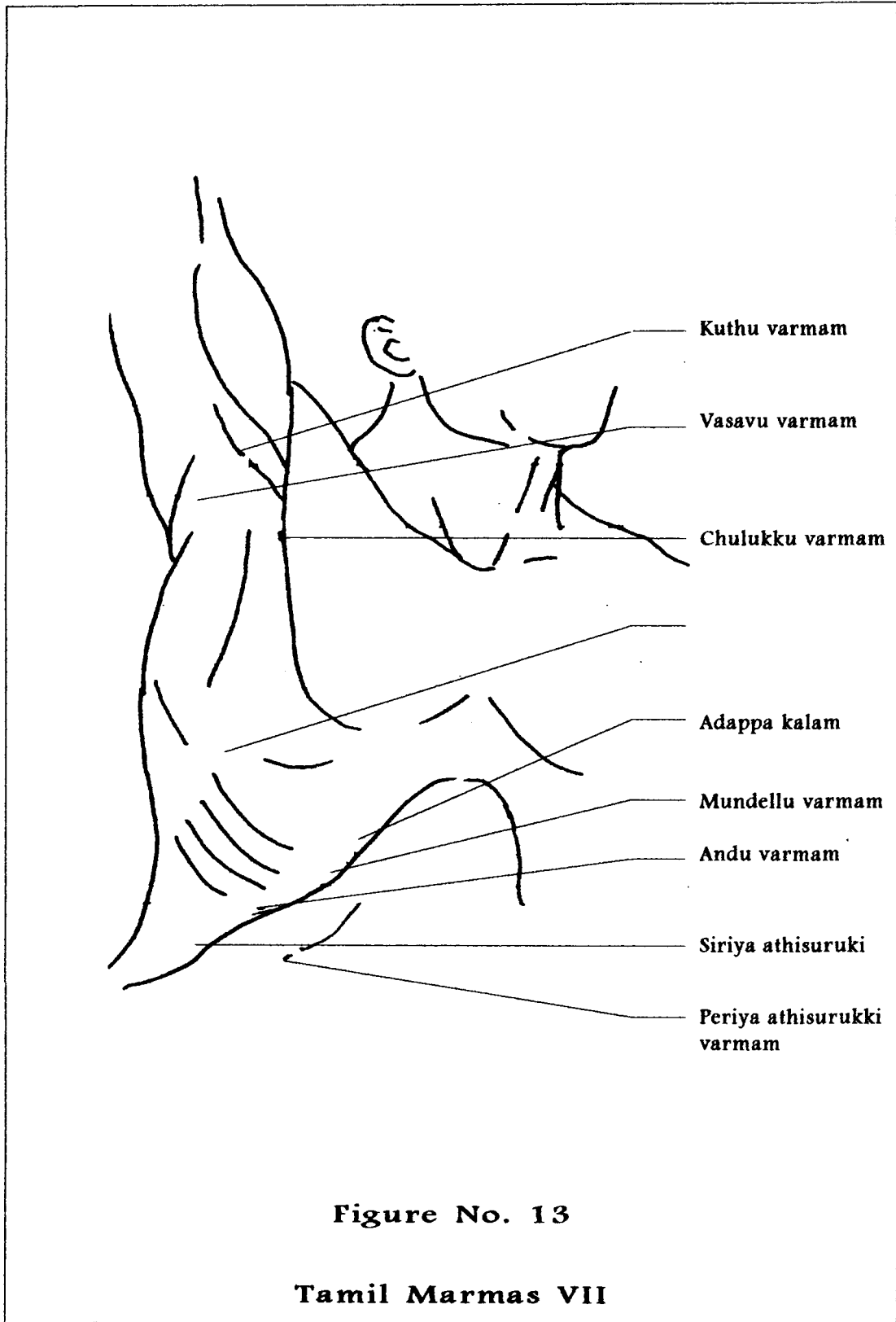


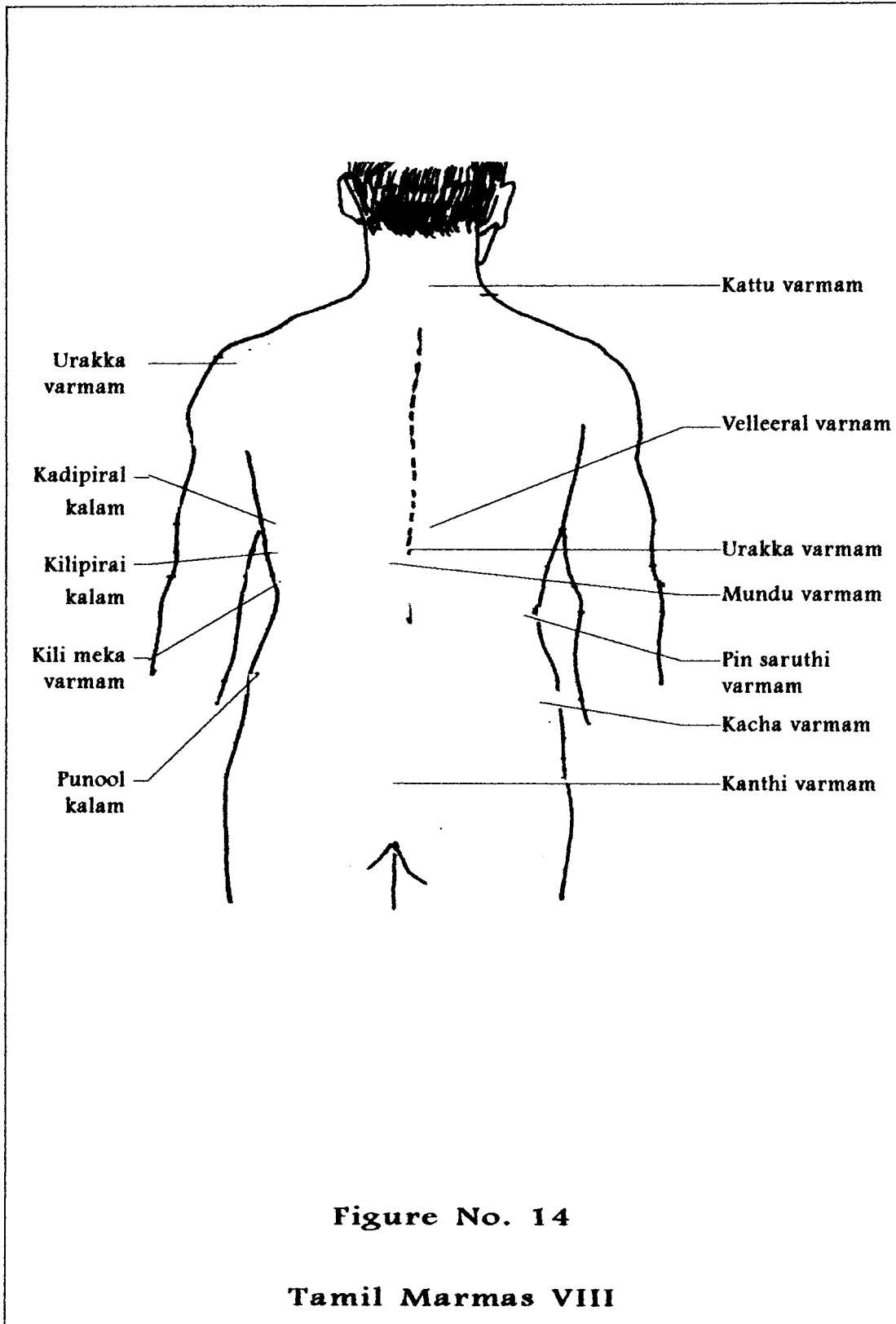
Figure No. 10

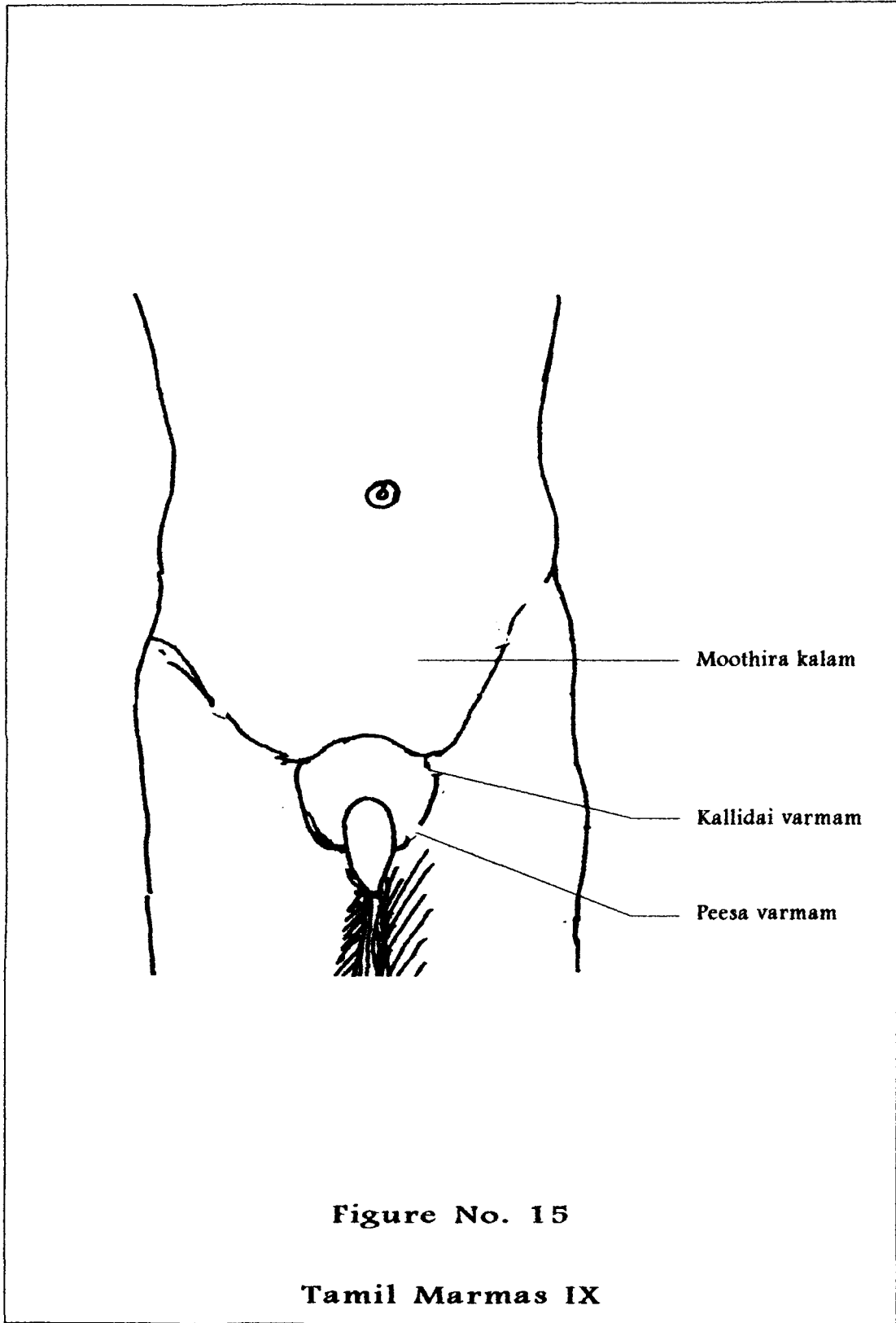
Tamil Marmas IV











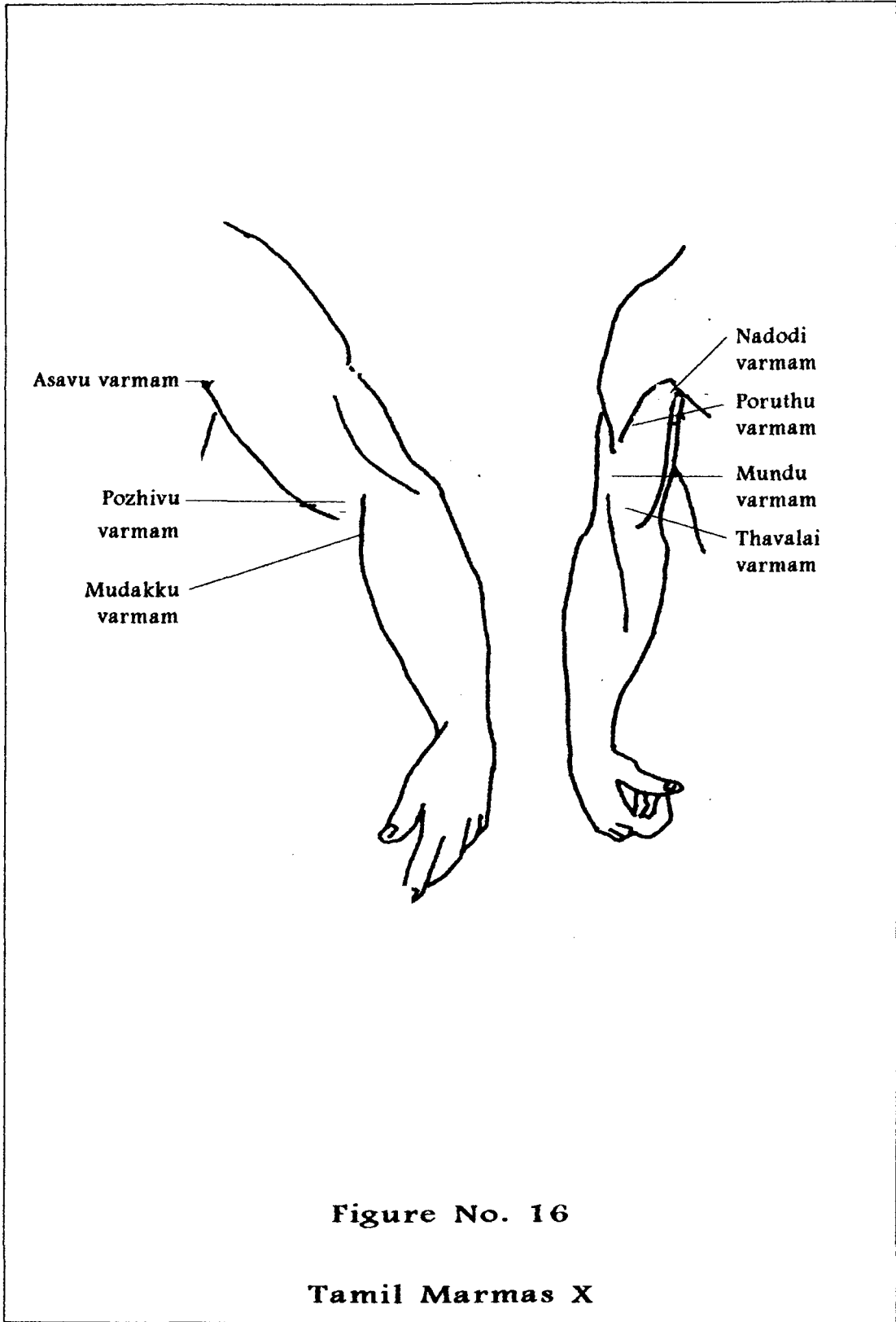
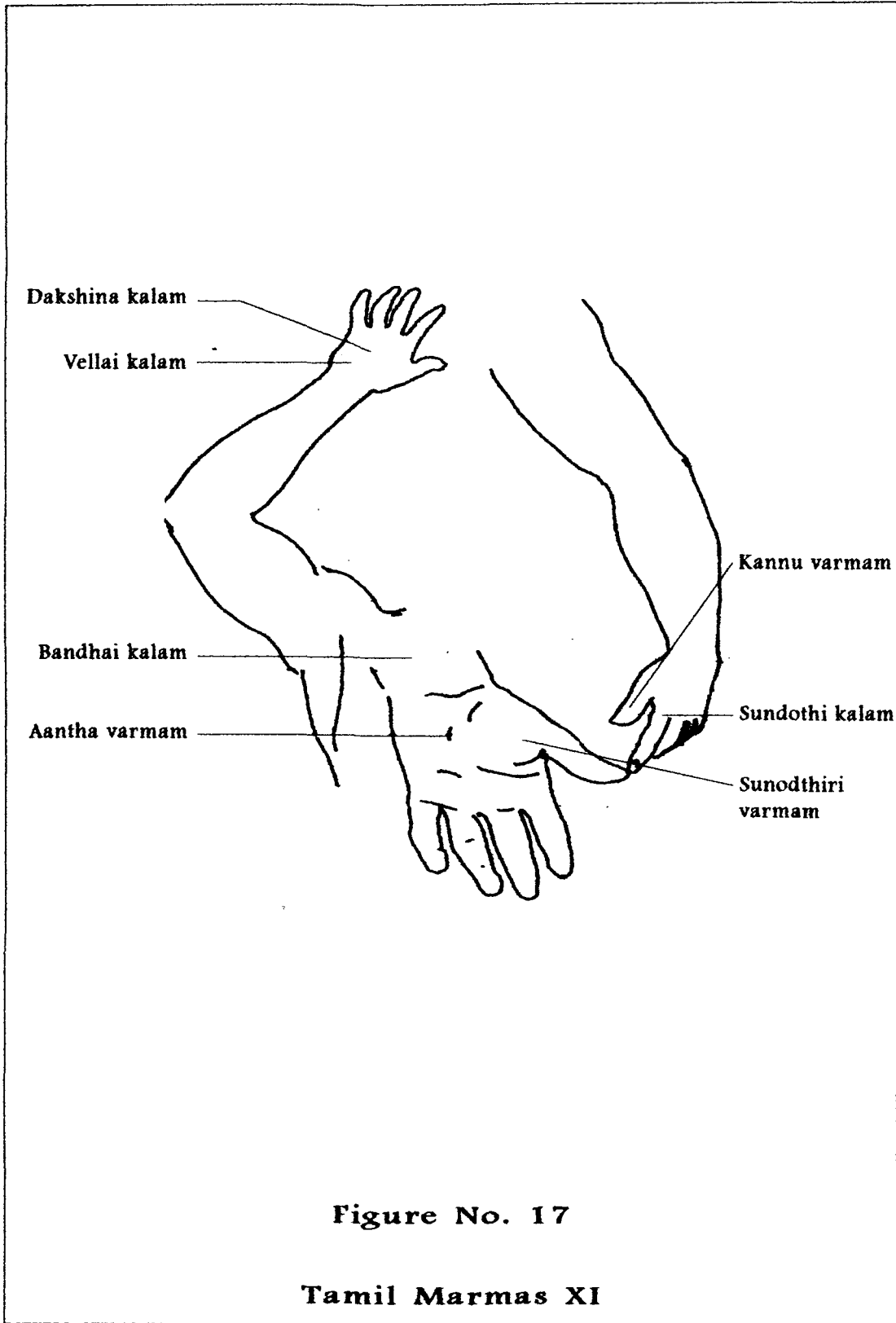
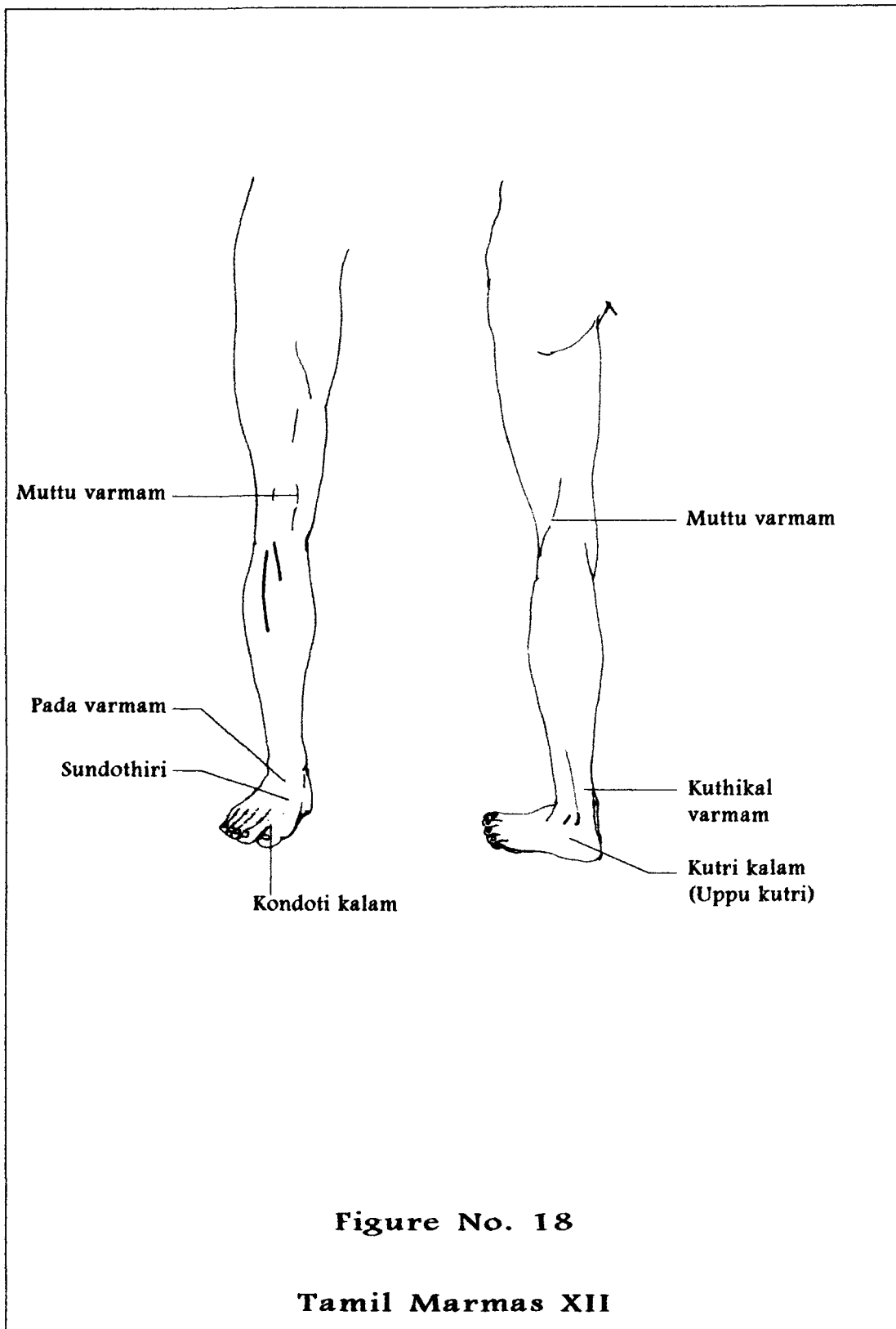


Figure No. 16

Tamil Marmas X





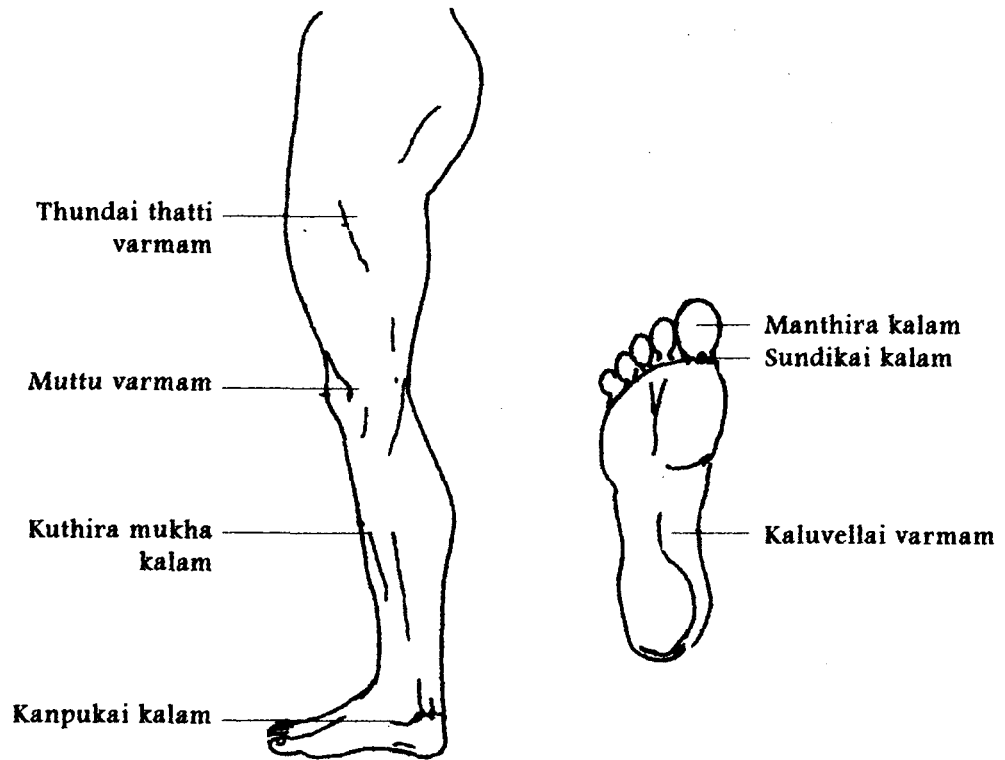


Figure No. 19

Tamil Marmas XIII

The Kulabhyasa or Kulayana Marma System

Like the *Sidha* system of *marma* (108 points) present in Tamil Nadu which traces its origin to the *vedic* sage *Agasthya*, the *Kulabhyasa* or *Kulayana* system of *marma* (64 points) prevalent in erstwhile Malabar, that is Northern Kerala, comprising the districts of Palghat, Malappuram, Calicut, Cannanore and Kasargodu, traces its origin to the *vedic* sage *Parasurama*. Legend has it that *Parasurama* created the land of Kerala by hurling his battle-axe into the Arabian sea. The land which surfaced when the water receded was then distributed by him to 64 Brahmin families, who were brought down from the North as settlers. Meaning of the word *kula* in Sanskrit is *a family or clan of noble descent*. This is in all probability the back ground in which the 64 point marma system of Kerala got into name and is now commonly accepted as such.

But unlike the 107 point *marma* system, of the ancient Indian surgeon *Susrutha*, which was developed primarily for helping the surgeon to safely operate on the human body and the 108 point marma system of the ancient *Tamil sidhars* (saints) meant primarily for treatment of various ailments and

diseases, the 64 points marma system of the *Kalari abhyasis* (practitioners of the traditional martial art) of *Kalaripayattu* peculiar of northern Kerala was developed with the specific purpose of injuring or killing an adversary in a personal combat.

As the *Kalari abhyasi* advanced in his skills, generally after twelve years or more of continuous training, he would naturally try to penetrate into the secret body of knowledge enshrined in the heart of his practice. But entry used to be and is even now jealously guarded and restricted by the *Gurukkals* (teachers of the art) who insist that only those of sterling character and proven conduct should gain access to the esoteric aspects of harming as well as healing. This body of knowledge which is predominantly medical in nature was recorded on palm leaves and handed down from master to disciple through generation of practitioners of the art of *Kalaripayattu*.

The combative applications of these 64 marma points known by 37 *marma* are dealt with elaborately in the final stage of training called *Verum kai* (Bare hands) in the martial art of *kalaripayattu*. There knowledge of the anatomical situation of these points is not sufficient for an effective knock -out either with bare hands or with striking weapons meant

for the purpose such as the *otta* (a curved blade of hard wood) or the *marma khol* (a short stick which when held in the hand protrudes an inch or from either side). Stance, sitting, surface angle, direction, depth, combination of points, exact time of striking and so on are important factors requiring careful study and a high degree of still for making the *prayogam* (application) really effective.

Little wonder than that a lot of care is demanded in the process of selecting most worthy disciple to carry on the inner tradition of the art of *kalaripayattu*. The following is a typical imitation session in the art of *marma -adi* (*marma* hitting) excerpted from *The way of the warrior - The paradox of the martial arts* - by Howard Reid and Michael Croucher based on the BBC Television series by the same name.

The master : I have been practising this *marma* (art of *marma - adi*) for the last 25 years and I have not taught it to anyone so far because it is equal to death. Now, I am imparting this skill to you in confidence and trust. This art has a long tradition and has been practiced for a long time. When practising this art you should bear in mind your parents and your country. You should bear no malice, understand that you should use this art only when your life is in danger

and you have no other means of protecting yourself you should not use it in a fight.

Disciple asked : Suppose there is a fight what do you do.

The master answered : If there is a fight there are three things to remember - you must try to make peace. You must say 'what do you want? I will give it to you'. You must say 'look here, let us not fight.' If this does not work and there is no way of escape, you must protect yourself. Even then you should use only the half hand to protect yourself. You should never use the Full hand you should keep it as a technique, that's all. Just keep it as a technique. When I say *Full Hand* it means the whole length of the arm. When I say *Half Hand* you use only half the arm. You must never use the *Full Hand* at any time. It will lead to death we need not become murderers.

The master went on : If there is no other way of escape, you should look carefully around on all sides to make sure no one is watching you or observing you, then use the Half Hand and escape.

Disciple asked : Why do you have to look around?

The master explained : Because if the blows are severe, the person might still die and we

might become killers. There should not be witnesses to say we beat a person and killed him. You must look around first, use the Half hand only and then escape. Besides that, another important thing is that you should not reveal to anyone that you know this art. You should not tell anyone that you know *Marmam*. Do you know what people will do if they find out? They will come up behind you and stop you. If your enemies find out that you know this art, they will not meet you face to face. They will try to attack you unawares.

Disciple commented : So, that will put us in great danger. If we do not tell anyone, we will at least be able to see enemies approaching and it will be easier to escape.

The master teaches the disciple the quick, unexpected strikes that drive past any guard to the vital points. Then he acts out the symptoms of one who has been struck in that particular spot. Finally, he teaches the antidote to resuscitate the victim, which may involve massage, light blows or even blowing chewed pepper into his ears or nostrils while striking him gently on the top of the head, demonstration of the strike follows demonstration of the resuscitation until after an hour the master ends the lesson.

Master : This is a great act. You should not teach it to just anybody. You must re - examine

everything about the person before you consider teaching him. Go and see him and assess what sort of person he is. Find out what he is like, annoy him, then study what he says and whether he gets angry and whether he is arrogant. Do you understand? If it is only after testing a person well that you can know whether you can teach him. Do you remember all that I have said?

The disciple affirms he has. Injuries to these *marma* points are not specifically treated with herbal preparations as in the Tamil system but in emergencies handled indirectly, that is, through use of certain procedure of light counterblows with or without joint manipulation. This is called *Maruthattu* the underlying principle in this form of physical treatment is the same as in the Tamil system - the blocked *nadis* (nerve channels) are opened up for re-establishing the flow of *prana* (vital air/ life-force) so that healing can be facilitated and the damaged anatomical area repaired naturally. The usual system of toning and revitalising these marma points in the *kalaries* is by massage done with the feet. Here the *Gurukkal*, who doubles up as indigenous medical practitioner, suspends his body weight by using his hands to hang onto two ropes tied from the roof or ceiling so that only the required amount of pressure

(body weight) is applied to various body parts. It is a rule that this massage is done only after the recipients body is annointed with a mixture of three different oils known as '*kalari mukkoottu*'. The lines of massage follow the *marma nadies* (nerve channels) on which the *marmas* are situated.

To conclude in the words of Howard Reid and Michael Croucher quoted in their book '*The way of the warrior - The Secret System of Marma - adi* adds to the evidence of the depth and antiquity of *Kalaripayattu*. It brings the art into line with the most esoteric of its Chinese and Japanese counterparts which also contain secret knowledge of a deadly nature. Experts, who have compared the locations of the vital spots revealed in the ancient Indian texts with the locations known to the practitioners of the modern Chinese and Japanese arts have found a high degree of correlation.

In accordance with the martial arts tradition, masters of *marma - adi* in south Indian knows how to resuscitate anyone who has been struck on the vital spots. They do this by massage, bone and joint manipulation and the use of herbs and poultices. It is not surprising that they should have gained such knowledge, since occasionally during training a student is struck accidentally on a vital spot.

One aspect of the system that is unique to south Indian is that there exist a few men who are masters of *Marma adi* alone and who do not practice any other form of martial art.

As discussed this system is used purely for fighting purposes and the *marma* point are not well defined. But one thing is clear, these *marma* points are situated on vulnerable parts of human body generally attacked during physical fighting. This lack of definition could also be due to the nature of physical fighting. As everybody knows, it is not possible to hit very small areas with great accuracy on a moving target. Here the target is a human being having intelligence considered equal to that of the offender, make things even more difficult. Further, the location of these *marma* vary from *Gurukkal* to *Gurukkal* thus complicating matters and making compilation of a uniform system a forbidding task. Hence an in-depth anatomical study has not been attempted. However the correspondences and similarities to the *Ayurveda* or *Tamil marma* wherever found have been briefly indicated in this study.

According to *Kulabhyasa marma* there are Sixty four *marmas* in the body with thirty seven names twelve are in the upper extremity, ten in the lower extremity, twelve in thorax, seven in the neck, seven in the back and sides, thirteen in the head and face.

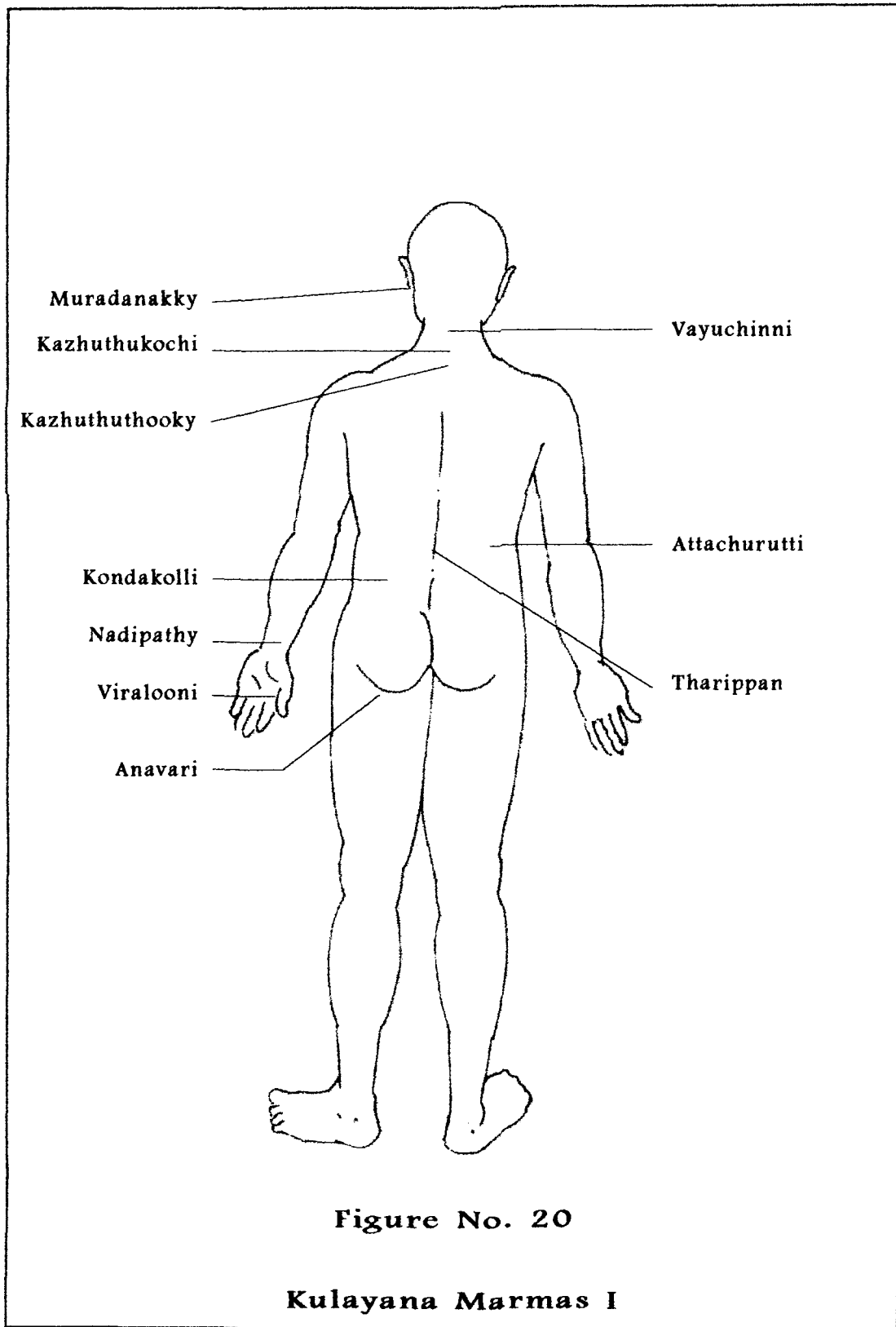
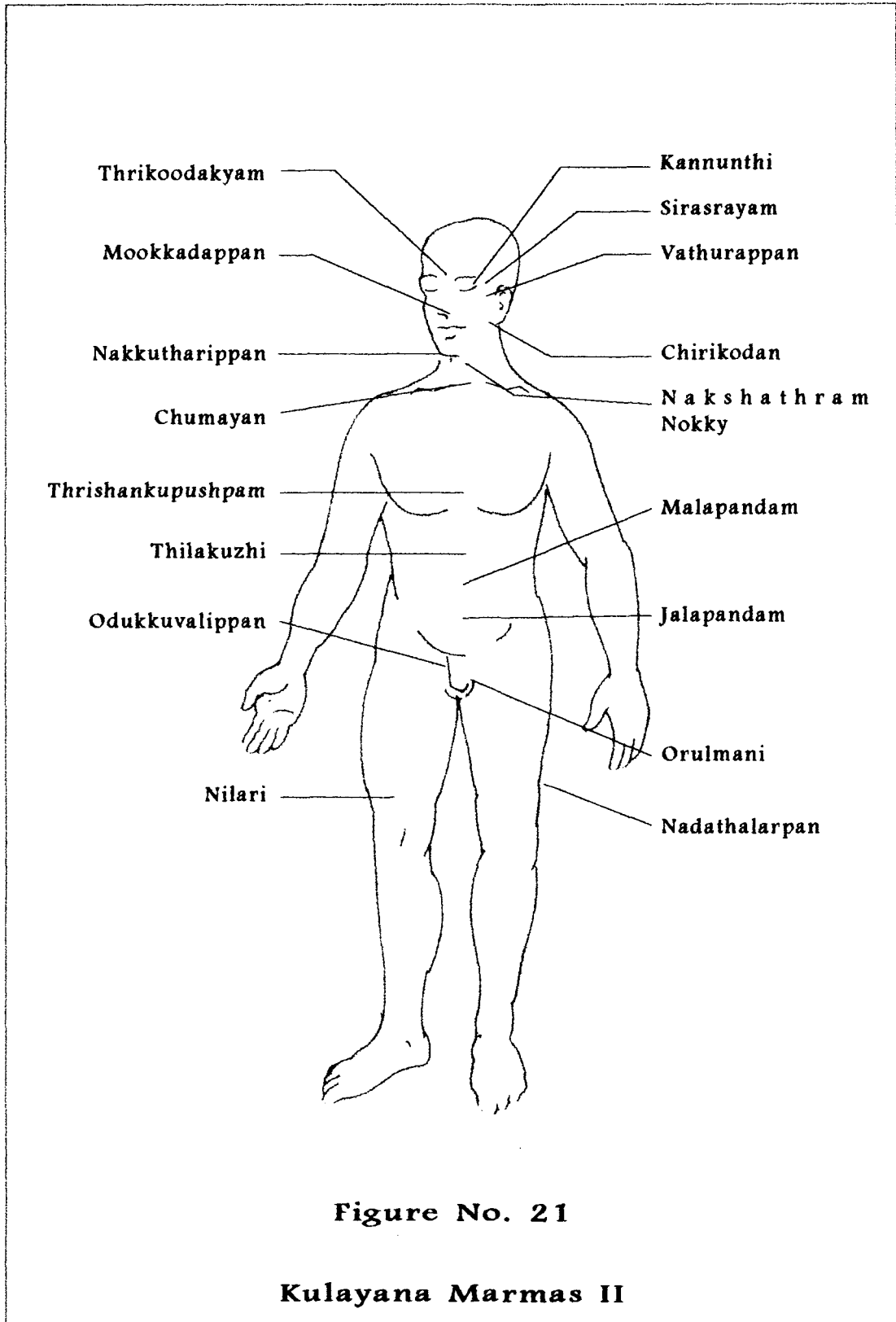
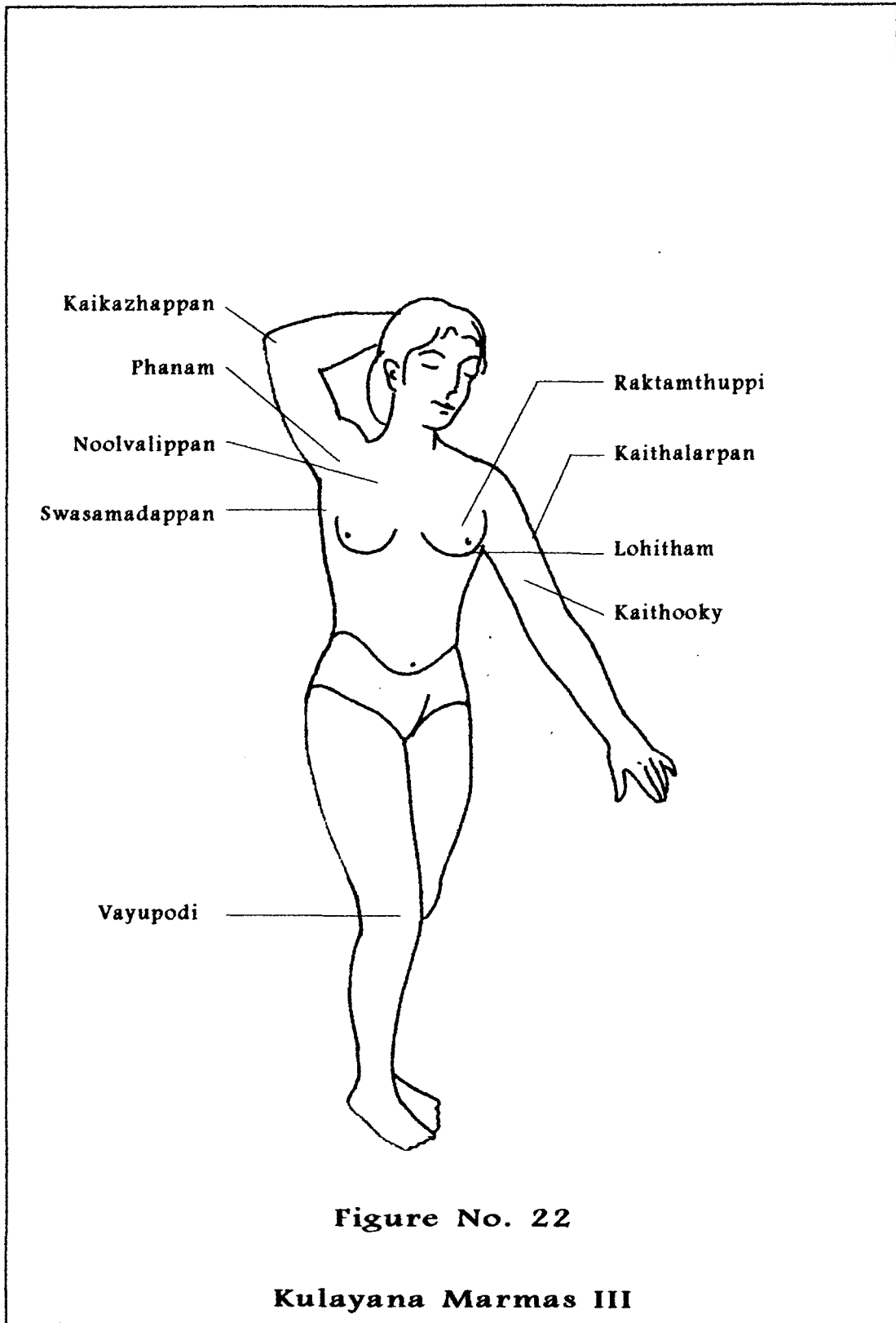


Figure No. 20

Kulayana Marmas I





CLASSIFICATION

- g Ayurveda Marma Sastra
- g Tamil Marma Sastra
- g Kulayana Marma Sastra

CLASSIFICATION OF MARMAS

The one hundred and seven *marmas* which are spread all over the human body can be classified into several groups depending upon the number, dimension, structure, region, prognosis.

Marmas are generally classified as

Chart No. 1

1. Sankhya Bhedena
(Numerical Classification)
2. Avayava Bedena
(Regional Classification)
3. Ashraya Bhedena
(Structural Classification)
4. Parinama bhedena
(Prognostic Classification)
5. Parimana Bhedena
(Dimensional Classification)

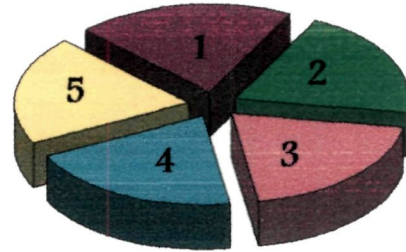


Chart No. 2

Sankhya Bhedena (Numerical Classification)

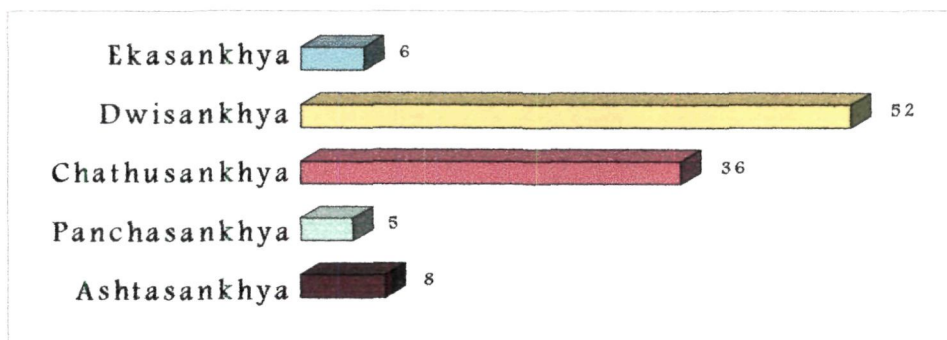


Table No. II-a

I. Ekasankhya (One in number)

› Hrudaya	› Vasthi	› Nabhi
› Gudam	› Sthapani	› Adhipam

Total 6

Table No. II-b

II. Dwisankhya (Two in number)

› Janu	› Koorparam	› Gulpham
› Manibandham	› Kukundaram	› Avartham
› Krikatika	› Vitapam	› Kaksadharam
› Amsa	› Vidhura	› Utkshepa
› Sankha	› Apasthambha	› Kateekatharunam
› Nithambha	› Amsaphalakam	› Apangam
› Sthanarohitham	› Parswasandhi	› Neela
› Manya	› Sthanamoola	› Phana
› Apalapa	› Brihathi	

Total 52

Table No. II-c

III. Chathusankhya (Four in number)

› Thalahrith	› Indravasthi	› Lohithaksham
› Urvi	› Ani	› Kurcha
› Kurchasira	› Kshipra	› Sringatakam

Total 36

Table No. II-d

IV. Panchasankhya (Five in number)

› Seemanthas - 5

Total 5

Table No. II-e

V. Astasankhya (Eight in number)

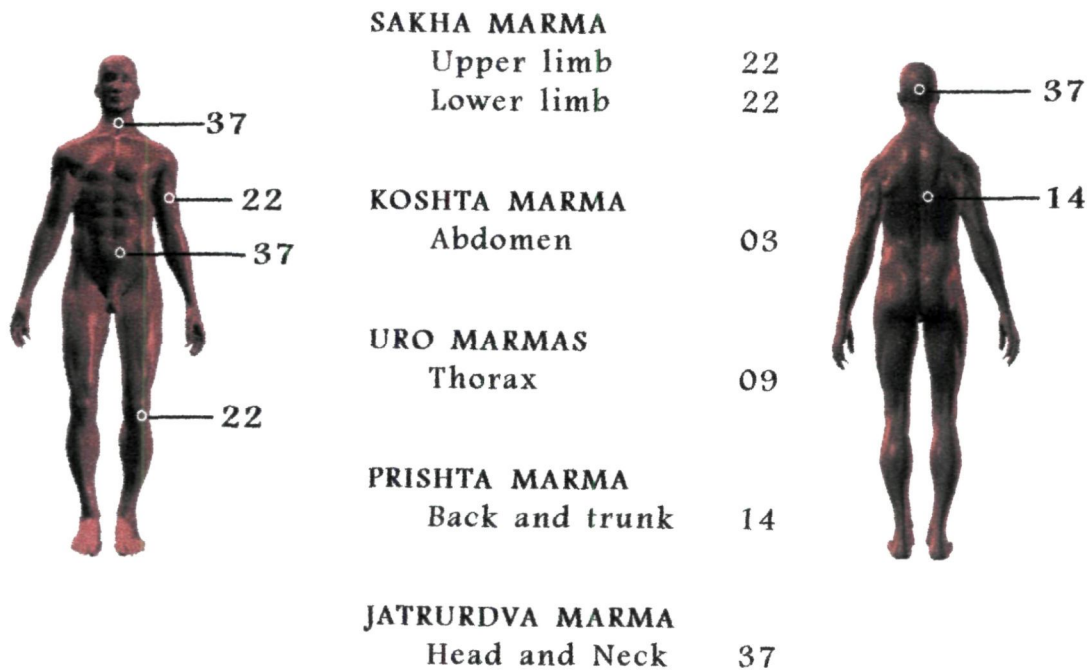
Matruka - 8

Total 8

Regional Classification

Structurally, the body has six *angas*.¹ They are *Siras* (head) *Antharadhi* (the abdomen and thorax) two *bahoos* (Upper extremities) and two *Sakthi* (Lower extremities). The one hundred and seven *marmas* which are distributed all over the body can be classified as per the given figure.^{2,3}

Chart No. 3



Sakha Marmas^{4,7}

Table No. III-a

1. Kshipra	4	6. Gulpha	2	11. Bahvi	2
2. Talahrudaya	4	7. Indravasthi	4	12. Urvi	2
3. Kurcha	4	8. Koorpara	2	13. Vitapa	2
4. Kurchasira	4	9. Janu	2	14. Kaksadruk	2
5. Manibandha	2	10. Ani	4	15. Lohitaksa	4

Total 44

Udara Marmas⁵

Table No. III-b

1. Guda	1	2. Vasthi	1	3. Nabhi	1
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Total 3

Uro Marmas⁵

Table No. III-c

1. Hrudaya	1	2. Sthanamoola	2	3. Sthanarohitha	2
4. Apasthambha	2	5. Apalapa	2		

Total 9

Prishta Marmas⁶

Table No. III-d

1. Kateekatharuna	2	2. Nithambha	2	3. Kukundara	2
4. Parswasandhi	2	5. Bruhathi	2	6. Amsa	2
7. Amsaphalaka	2				

Total 14

Oordhvanga Marmas⁷

Table No. III-e

1. Neela	2	2. Manya	2	3. Mathruka	8
4. Krikatika	2	5. Vidhura	2	6. Phana	2
7. Apanga	2	6. Avartha	2	9. Sankha	2
10. Utksepa	2	11. Sthapani	1	12. Seemantha	5
13. Sringataka	4	14. Adipathi	1		

Total 37

The Structural Classification of Marma

Structurally the *marmas* are classified into five by *Susrutha*. *Vahata* the author of *Ashtanga Sangraha* agrees with the *Susrutha* point of view.¹⁰ *Vaghbata* consider yet another *marma* by term *Dhamani marma*.⁸ He defines *marma* as the *sangama sthana* of the six structures namely *mamsa*, *asthi*, *santhi*, *snayu*, *sira*, and *dhamani*.

It is worthwhile to note that in this context *Susrutha* denies *Vaghbata's* view.¹¹ He opines that there cannot be any other *marma* structure other than this. He categorically denies this due to the following reasons which the commentator *Dalhana* clarifies.

Dalhana says that - if injured, the *srothamsi* can also lead to death. But the *srothas* are not considered as *marma* because the *srothas* are not

seen devoid of these structures like *mamsa*, *sira*. Otherwise *srothas* are a part and parcel of these structures. Hence there is no need for the addition of any further in the classification.¹²

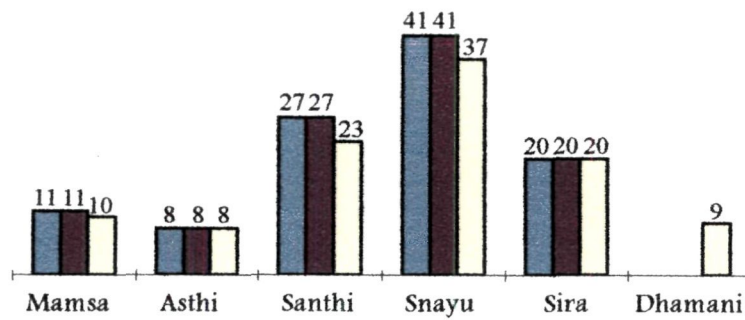
Table No. IV

Mamsa marma	(marmas in muscle)
Sira marma	(marmas in vessels)
Snayu marma	(marmas in ligaments)
Asthi marma	(marmas in bones)
Sandhi marma	(marmas in joints)

Different classification of *marmas* on the basis of their Anatomical Structure as described in *Samhita Granthas*.

Chart No. 3

Structural Classification



Significance of Mamsa Marma¹³

One of the characteristic feature of living organism is its capacity to react according to the changes taking place around it with proper responses, either due to an electrical, chemical, photogenic or mechanical stimuli. These responses are possible only by some sort of effector system. At the site of muscle stimuli, the actin, myosin are excreted out. The *mamsa dhatu* also possess excitability, capable of initiating contraction. The association of *mamsa dhatu* with *asthi dhatu* and its innervation by *snayu* (nerves) and *sira*, (blood vessels) transforms it into a best effector system capable of protecting the body from external trauma and injuries. This *mamsa dhatu* is the most significant anatomical unit of *marma*.

When a *mamsa marma* is injured, bleeding occurs suddenly. The blood is seen as a fluid washed with *mamsa*. Moreover the individual is seen to be more pale due to the excessive loss of blood, his power of perception is lost leading to death.^{14,23}

Table No. IV-a

Vaghbata		Sushruta	
Indravasthi	4	Indravasthi	4
Talahrudaya	4	Talahrudaya	4
Stanarohitha	2	Stanarohitha	2
		Guda	1
Total	10	Total	11

Sira Marma (includes and Sira - Blood vessels)^{15,26}

The blood vessels are distributed in the body by series of large and small tubes which ramify and continually subdivide until the formation of capillary network. They vary in structure and are either called capillaries or vessels, depending upon their particular structural and functional characteristics. From arteries the blood is collected in minute vessels namely the veins which return the blood to heart. If any of these *siras* are torn or punctured or injured at the site of *marma* the nutrition of that vital part is lost ultimately leading to loss of function, pain, and even death. If a major blood vessel is punctured or injured it may lead to shock and ultimately death, by excessive blood loss.

Table No.IV-b

Vaghbata		Sushrutha	
1. Brihathi	2	1. Neela	2
2. Mathruka	8	2. Manya	2
3. Neela	2	3. Mathruka	8
4. Manya	2	4. Sringataka	4
5. Kakshadhara	2	5. Apanga	2
6. Phana	2	6. Sthapani	1
7. Vitapa	2	7. Phanam	2
8. Hrdaya	1	8. Sthanamoola	2
9. Nabhi	1	9. Apalapa	2
10. Sthanamoola	2	10. Apasthambha	2
11. Parswasandhi	2	11. Hrdaya	1
12. Apalapam	2	12. Nabhi	1
13. Sthapani	1	13. Parswasandhi	2
14. Urvi	4	14. Brihathi	2
15. Lohithaksa	4	15. Lohitaksa	4
		16. Urvi/Bahvi	4
Total	37	Total	41

In the case of injury to a *sira marma* excessive bleeding occurs suddenly. The blood loss is more dense. Due to the loss of blood, the patient suffers from vertigo, dyspnoea, unconsciousness, cough and finally he dies.

Asti Marma^{17,18,24}

Bone is an important anatomical structure from an orthopaedic point of view. Any injury to the bone, affects the architecture and balance of the human body. The injury to a bone is dependent upon the force of violence and the nature of violence. If *asthi marma* is injured, the blood will be seen mixed with marrow. Bleeding occurs intermittently. Pain will be felt more as these *marmas* are particularly the seat of *vatha*. Usually the *asthi marmas* are considered as *Vaikalyakara marma*.

Table No. IV-c

Vaghbata		Susrutha	
Sankhamarma	2	Sankhamarma	2
Kateekatharuna	2	Kateekatharuna	2
Nithambha	2	Nithambha	2
Amsaphalaka	2	Amsaphalaka	2
Total	8	Total	8

Sandhi Marma^{19, 20}

Since any kind of movement including locomotion is almost always accomplished by the bending or straightening of appendages *sandhi* has got its importance. The skeletal system should have

provision of intervening arrangements permitting some degree of torsion, angulation, flexion.

Joint injuries are classified into dislocation, subluxation and strain. The common cause is trauma. Injury to certain joints take, a longer time for healing as the elbow. They are termed as *marma*.

Table No.IV-d

Vaghbata		Sushruta	
Avartha	2	Janu	2
Manibandha	2	Koorpara	2
Kukundara	2	Seemantha	5
Koorpara	2	Adhipathi	1
Seemantha	5	Gulpha	2
Krikatika	2	Manibandha	2
Janu	2	Kukundara	2
Adhipathi	1	Avartha	2
Gulpha	2	Krikatika	2
Total	20	Total	20

In the case of injury to *marmas* the patient feels as if the wound is filled with *sooka*, and he suffers from *kunitwa*, *khanjatha*. There will be *balakshaya*, inability to move the organ, *sosha* and *sopha* on the joints.

Snayu Marma^{21,22,25}

The purpose of *snayu* is to prevent the abnormal movements of a joint. Though some of the ligaments are better protected by muscles, some very important ligaments are not. The lateral collateral ligaments of knee, the inferior tibio fibular ligament are poorly protected. Injury or trauma to such ligament can lead to irreparable damage. Hence they are termed as *Snayu marma*. In case of injury to *snayu marma* the pain will be very severe. Disease like *ayama*, *akshepaka* and paralysis of that particular organ may occur. Patient may be unable to walk sit or sleep. Deformity of that organ may also occur.

The term *snayu* is a controversial one. It has got meaning as ligament, muscle tendon. This might be true if we take the meaning of *snayu* in *Asthivignaneeya* and *Sandhivignaneeya*. But *marma* enumerated here has little or no connection with the or *Asthi*. Even though some are situated very close to this others like *vasthi*, have no relation with these. This is just to state that the *snayus* in this context do not necessarily mean ligaments and muscle tendons but should be understood in a its wider aspect.

Table No.IV-e

Vaghbata		Sushrutha	
Ani	4	Ani	4
Kurcha	4	Vitapa	2
Kurchasira	4	Kaksadhara	2
Apanga	2	Kurcha	4
Ksipra	4	Kurchashira	4
Utksepa	2	Vasthi	1
Amsa	2	Kshipra	4
Vasthi	1	Amsa	2
		Vidhura	2
		Utkshepa	2
Total	23	Total	27

Dhamani Marma

In the case of injuries to the *dhamani marma*, sudden bleeding occurs, where warm blood rushes out as froth with a hissing noise. Due to the sudden flow of arterial blood the patient dies.

Table No. IV-f

Guda	1
Apasthambha	2
Vidhura	2
Sringataka	4
Total	9

The fatal effects of injuries on *snayu marma* are mentioned above as *Ayama, Akshepaka*. According to modern science these types of disease are generally caused by the functional derangement of nervous system. The term *nerve* is literally interpreted as *nadee* in *Ayurveda*. But *Ayurveda* does not study the nervous system as modern science does. But this does not mean that the *Ayurvedic* scholars were ignorant of *nadees*. These functions are studied under the head of *Vathika dharmas* in *Ayurveda*. There are many controversies between the terms *dhamanis, nadi, sira, srothamsis*. These terms can be seen to be used interchangeably.

Several authorities assert that no arbitrary distinctions should be made among the *siras, dhamanis* and the *srothas*, since the *dhamanis* and *srothas* are different modifications of one original kind of *sira*. This opinion is not valid as they have got different natures, origins and functions as being described in various texts. Owing to their adjacent positions, existence of several authoritative data regarding the singularity of their character, similarity in their functions and the minute nature of their shape they appear to be homologous in their action even amidst the real diversities in their work and office.

Therefore, we are bound to study the functions of *nadees*, *siras* and of *dhamanis* separately. Since the functional and structural descriptions of *nadees* are described along with the study of *siras*, *dhamanis*, *srothamsis*, and along with the study of the functions of *tridoshas*, a separate chapter on *nadees* cannot be seen in the *Samhita Grandhas*. It is a fact that *nadees* are also vital as the *siras*, and *dhamanees*. Though in the study of *marma* we have seen that the *marmas* are classified on the basis of the predominance of vital structures, as *mamsa marma*, *sira marma*, a separate group by name *nadee marma* cannot be seen. At the very same time, we have seen that the fatal effects of certain *marmas* grouped under the head of *snayu marmas* show that the *snayus* also have got equal importance. We had studied that the *snayus* are the ligaments or muscle tendons. The most important functions of ligaments or muscle tendons are to enable movements of flexion, extension and to maintain the joints in position. So when these structures are injured, fatality as *vikalatwa*, *sthambanam* will be result. This shows that the injuries to *snayus* is as vital as injuries to *nadees*, and fatal symptoms due to injuries to both structures have got some uniformity. Therefore, by the classification of *snayu marmas* the *nadees* are also understood, and the fatal effects may be due to the trauma to the *snayu* or *nadees*.

Difference of opinion²⁷

According to *Susrutha*, *Guda marma* is included as *mamsa marma*. He considers *Kaksadhara*, *Vitapa* and *Vidhura* as *snayu marma*. He also includes *Apasthambha* and *Apanga* as *sira marma*. However he does not consider *dhamani marma*.

Panchabhauthic Composition of Marma^{28,29}

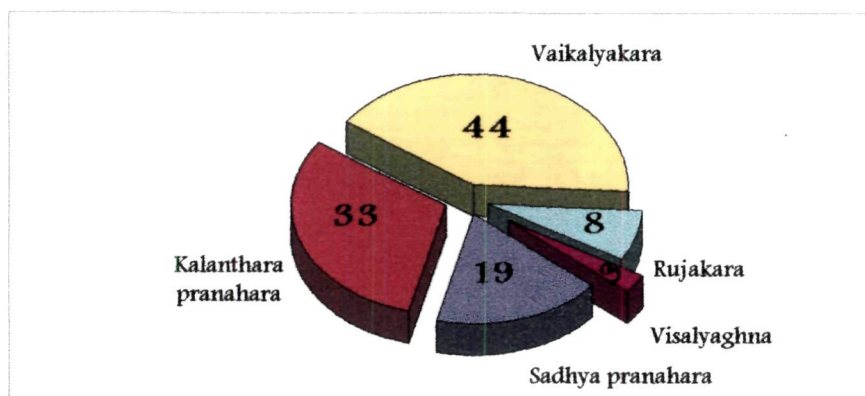
Marmas have their *panchabhauthic* constitution. Depending upon the domination of *panchabhoota* it is further divided into five³⁵ as in table below.

Table No. V

Sadya pranahara	Agni Guna	19
Kalanthara pranahara	Soumya, Agni	33
Vishalyaghna	Vayu guna	03
Vaikalyakara	Soumya	44
Rujakara	Agni, Vayu	08

Chart No. 4

Prognostic Classification



Sadya pranahara Marma³⁰

These *marma* when injured lead to instant death or death within seven days. *Sadya pranahara* has *agni* property. As the *agniguna* get extinguished quickly, any injury to the *marmas* proves highly fatal. Prognosis can be decided only after seven days.

Table No. V-a

Name	Asraya (Vaghbata)	Asraya (Sushrutha)	
Nabhi	Sira marma	Sira marma	1
Sankha	Asthi marma	Asthi marma	2
Adhipathi	Sandhi marma	Sandhi marma	1
Sringataka	Dhamani marma	Sira marma	4
Guda	Dhamani marma	Mamsa marma	1
Hridaya	Sira marma	Sira marma	1
Vasthi	Snayu marma	Snayu marma	1
Matruka	Sira marma	Sira marma	8

Kalanthara pranahara³²

Injury to certain part of the body may result in delayed death, that is it may prove fatal after a span of time. Its *panchabauthic* constitution is *Apya* (watery). As already said the fiery property diminishes gradually and hence it may prove fatal at a later time. Prognosis can be decided only after 15-30 days.

Table No. V-b

Talahrudaya	4	Parswasandhi	2
Kateekataruna	2	Seemanta	5
Sthanamoola	2	Indravasthi	4
Kshipra	4	Apalapa	2
Brihathi	2	Nitamba	2
Stanarohitha	2	Apastamba	2

Total 33

Vishalyaghna³²

Vishalyaghna is an interesting type of *marma*. When an injury occur over this part due to any foreign body, the patient dies the moment the *salya* or foreign body is removed. Hence it is advisable not to remove the *salya*.

Vishalyaghna marmas are predominantly of *vatika* predominance proportion. Presence of *salya* inside the body will obstruct *vata* to escape and the patient will survive but as soon as *salya* is removed the obstructed *vata* get an outlet to escape from the injury. Therefore the presence of foreign body allows the patient to survive whereas the extraction causes death.

Vaikalyakara³³

The *vaikalyakara marmas* are those *marmas* when injured leads to deformity. These *marmas* predominantly possess *soumya guna*. Due to its *soumya*

swabhava the injury to this *marma* will lead to death. Life is maintained by the *sthira* and *saithya* qualities of the above *marma*.

Table No. V-c

1. Phana	2	10. Lohithaksa	4
2. Vitapa	2	11. Krukatika	2
3. Apanga	2	12. Ani	4
4. Urvi	4	13. Amsa	2
5. Vidhura	2	14. Kaksadhara	2
6. Kukundara	2	15. Amsaphala	2
7. Neela	2	16. Kurcha	4
8. Janu	2	17. Avarta	2
9. Manya	2	18. Koorpara	2

Total 44

Rujakara Marma³⁴

This is those part in the body when injured causes severe pain. In a *rujakara marma* the *agni* and *vayu* do have predominant properties, hence excruciating pain is the result. Some *Acharyas* opine that here all *panchabhutas* do have predominant properties.

A study was done on this, where in it is proved to be positive through a pain threshold meter.

Table No. V-d

1. Gulpha	2
2. Manibandha	2
3. Koorchasira	4

Total 8

Tridosha and Triguna aspect³⁵

Table No. V-e

Sl.No.	Types of Marma	Tridosha	Triguna
1.	Sadya Pranahara	Tejas	Raja, Tama
2.	Kalantarapranahara	Teja	Soma, Raja, Tama
3.	Vishalyaghna	Maruta	Rajoguna
4.	Vaikalya kara	Soma	Tamo Guna
5.	Rujakara	Teja Maruta	Raja, Tama, Rajo Bahulya

Some opine that *pranahara marma* are formed by the combination of all the five components such as *mamsa, sira, snayu, asthi, and sandhi*, in their enhanced stage. *Kalanthara pranahara marma* has one component out of five absent or in a diminished state. When there are two components less (in the construction of a *marma*) it is known as *vishalya ghna marma*. When three components are less the *marma* is known as *Vaikalyakara*. When *marma* has only one of the five components then it is called as *Rujakara*. But

the above description is not correct because even when the bony *marma* is injured, blood also will flow out.

The four types of *siras* of the body generally enter the site of *marma* and provide nutrition to ligaments, bones muscles and joints and maintain the body. When the vulnerable areas receive an injury the *vatha* is aggravated and surrounds the *sira* from all sides. This aggravated *vatha* produces severe pain in the body.

The body suffering from intense pain starts collapsing and consciousness is gradually lost.

Therefore a surgeon intending to extract the foreign body should do so only after examining *marmas* with care.

Prognosis of Partial Injury of *marma*⁵

Any injury at the periphery of a *sadya pranahara marma* would kill the patient after a long time(it shows the features of a *Kalanthara marma* injury). *Kalantara pranahara marma* and *visalya pranahara marma*, if injured at the periphery will would produce disability (it shows the features of a *Vaikalyakara marma*.) *Vaikalyakara marma* (if injured at the periphery) would trouble the patient after sometime and give rise to pain also. The *rujakara marma* if injured at the periphery will produce mild pain.

Classification according to Parimana³⁶

One of the main aims of *Marma vignana* being described in *Sareera* is to avoid these vital points from being tampered for any reason especially from the surgical blade. It is with this aim that the dimension of each *marma* is narrated. After classifying this accordingly *Susrutha* observes that the related structures even in its vicinity should be avoided to the extend possible. Minute injury might turn to be fatal.

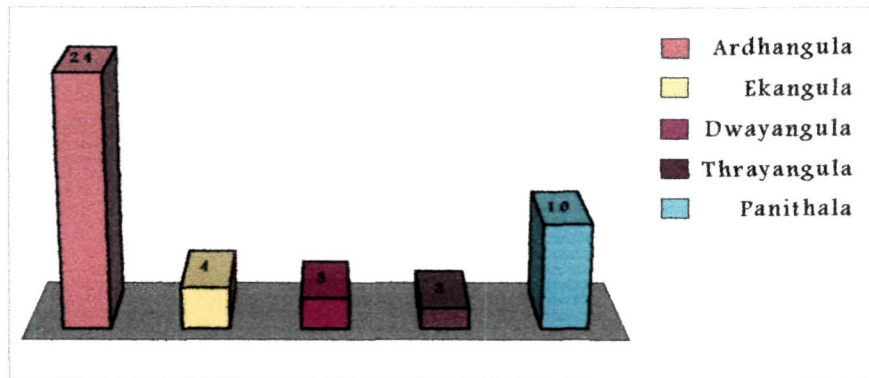
Accordingly *marmas* are divided into five. *Susrutha* has added *chathurangula* as a subdivision of *panithala*.

Table No. VI

1. Ardhangula	56
2. Ekangula	12
3. Dwayangula	06
4. Thrayangula	04
5. Panithala	29

Chart No. 5

Parinama Bhedena



Ardhangula marma are those *marmas* which are having half *angula* in dimension. They are,

Table No. VI-a

1. Thalahruth	4	13. Vidhura	2
2. Indravasthy	4	14. Utkshepa	2
3. Sthanarohitha	2	15. Apasthambha	2
4. Apanga	2	16. Sankha	2
5. Sthapani	1	17. Kateekatharuna	2
6. Phana	2	18. Amsa phala	2
7. Apalapa	2	19. Nithambha	2
8. Brihathi	2	20. Adhipa	1
9. Lohithaksa	4	21. Kukundara	2
10. Ani	4	22. Avartha	2
11. Kshipra	4	23. Krikatika	2
12. Amsa	2	24. Parsva sandhi	2

Total 56

Angula Mana Marma

Table No. VI-b

1. Urvi	4	2. Koorcha siras	4
3. Vitapa	2	4. Kakshadhara	2

Total 12

Dwayangula Mana Marma

Table No. VI-c

1. Manibandha	2	2. Gulpha	2
3. Sthanamoola	2		

Total 6

Thrayangula mana marma

Table No. VI-d

1. Janu	2	2. Koorpara	2
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Total 04

Panithala mana marma

Table No. VI-e

1. Hrudaya	1	6. Manya	2
2. Vasthi	1	7. Guda	1
3. Koorcha	4	8. Nabhi	1
4. Mathruka	8	9. Sringataka	4
5. Neela	2	10. Seemantha	5

Total 29

Sushruta considers Hrdaya, Vasthi, Kurcha, Guda and Nabhi as of four angula in parmana and the rest is of panithala. Some authors like gayi and bhoja too has altogether different classification. This has not included as this doesnot come in the scope of study and need to be probed further.

Structure of Marma

According to some authors the structure of *marma* can be visualised diagrammatically as shown below. It consists of a centre which is deep seated with



Figure No. 23 : Structure of Marma

spokes/ petals starting from the centre and reaching the periphery.

The grievousness of the injury depends upon the site of the injury. As narrated by *Susrutha* the *marma* of *sadya pranahara* type being injured at its edge brings death at a later stage. Likewise injury of a *kalanthara pranahara marma* at the periphery makes the organ deformed. The *vaikalyakara marma* will show the features of *rujakara marma* and *rujakara marma* produces excruciating pain if injured at the fringe.

Asadhya Lakshana of Marmabhighatha

Akshepa (Convulsions), *vikshepa*, (extreme weakness of the body), *soonyatha* (absent - mindedness), *bhrema* (giddiness), *vepanam* (shivering), *urdvaswasa* (dyspnoeae), *srasthangatha* (loss of integrity), burning sensation at the region of heart, and restlessness are the *asadhya lakshana* of *marma abhighatha*.

Tamil varma sastra

In various edited texts on *Varma* six types of *varmas* are described. They are from *Padu varma* to *Nokku varma*. But there are various classification regarding these as well.

The major classification of *varma* starting from *Padu Varma* to *Thodu varma* belongs to

Vaigai group and the rest forms the *Thogai* group of *varma*. There are many other classifications of these *varma*. Each author has a different type of classification and different names for the same place and one might feel that it is almost impossible to correlate and standardize these places.

Table No. VII

Different Types of Varmas (Life Centres)

1. Padu varma (Vital Life Centres)	12
2. Thodu varma (Medium Life centres)	96
3. Thattu varma (Striking Life Centres)	08
4. Odukki varma	06
5. Athara varma	06
6. Pei Bhootha varma	06
7. Poruttu varma	06
8. Ul varmam	06
9. Moli varma	unrevealed
10. Nokku varma (Meitheenda kala	unrevealed
11. Kudori varma	19
12. Vali varma	05
13. Channi varma	13
14. Thanthira varma	08
15. Thadavu varma	unrevealed
16. Nakku varma	unrevealed
17. Sarvanga varma	unrevealed

According to the *sastras* the human body is governed by 96 *thathuvas*. There are 72,000 nerves all over the body in which 108 *marmas* are

situated. These 108 points are seated in five broad centres.

Regional Wise Classification

Table No. VIII

1. Head region	25	4. Upper limb	14
2. Neck to Umbilicus	45	5. Lower limb	15
3. Umbilicus to Anal region	09		

Total 108

Varmas of Head and Neck

Table No. VIII-a

1. Kondai Kolli	2. Seerum Kolli	3. Pidari kalam
4. Charuthi kalam	5. Pochai kalam	6. Kutti kalam
7. Chevikutty kalam	8. Poikai kalam	9. Natchatra kalam
10. Kamboori kalam	11. Moorthi kalam	12. Annan kalam
13. Thilartha kalam	14. Minvetti kalam	15. Manthira kala
16. Nema varmam	17. Pakshi kalam	18. Kannadi kalam
19. Pala varmam	20. Kona varmam	21. Udira kalam
22. Ottu varmam	23. Urakka kalam	24. Sankuthiri kalam
25. Sumai varmam		

Total 25

Varmas Between Navel And Anal Region

Table No. VIII-b

1. Moothira kalam	6. Vellurumi kalam
2. Peesa kalam (Bheeja kalam)*	7. Vallurumi kalam
3. Kallidayam kalam	8. Nangu Kutti kalam
4. Valam puriyam kalam	9. Ani varmam
5. Edampuri kalam	10. Aantha varmam

Total 29

Varmas of Neck to Navel

Table No. VIII-c

1. Kakkatta kalam	24. Velleeral varmam
2. Kandi varmam	25. Pallai varmam
3. Kazhaladi varmam	26. Udal chulukki varmam
4. Kathir varmam	27. Chulukku varmam
5. Kathir Kamam varmam	28. Neru varmam
6. Thivalai kalam	29. Thumbi kalam
7. Tharumi varmam	30. Kai Kettu kalam
8. Enthi varmam	31. Chadai pirayam kalam
9. Kuthu varmam	32. Kili pirayam kalam
10. Vashavu varmam	33. Kili Meha varmam
11. Kuzhivu varmam	34. Punool varmam
12. Amattu varmam	35. Bhuja varmam
13. Anumar varmam	36. Irakku varmam
14. Koombu varmam	37. Ettu varmam
15. Panri varmam	38. Natellu varmam
16. Adappam varmam	39. Mundu varmam
17. Andu varmam	40. Kachai kalam
18. Mundan varmam	41. Kasha varmam
19. Surukki varmam	42. Kattu varmam
20. Chiriya churikki varmam	43. Kai koottu kalam
21. Mun Charuthi varmam	44. Kai Viriyam kalam
22. Pin Charuthi varmam	45. Kanthi varmam
23. Pareeral varmam	

Total 45

(Some do not consider the *Peesa kalam*, Those who consider finally end up with a score of 109 *varmas*)

Varmas of Upper Extremity

Table No. VIII-d

1. Kannu varmam	8. Pozhivu kalam
2. Dakshina varmam	9. Mudakku varmam
3. Choonthi varmam	10. Thavalai varmam
4. Choonthiri varmam	11. Thundu varmam
5. Vella varmam	12. Pothu varmam
6. Manibandham varmam	13. Asavu varmam
7. Anthamei kalam	14. Nadodi varmam

Varmas of Lower Extremity

Table No. VIII-e

1. Vallai varmam	8. Kannu pukayum kalam
2. Kondodi kalam	9. Kuthi Kal varmam
3. Kundikayam kalam	10. Kuthirai Mukha kalam
4. Vrithi kalam	11. Mudavu varmam
5. Kutri kalam	12. Thumbi kalam
6. Choonthiri kalam	13. Thudai Thatti kalam
7. Pada varmam	

Thontha varmam

There are three types of *varmam*.

1. Vatha varmam
2. Pitha varmam
3. Shlermana (Kapha) varmam.

If there is a combination of all the three *doshas* then we term it as *Thontha varmam*. Signs will

not be evident for this and the treatment will be very difficult, and should be administered within the ordinary limits under very careful guidance.

Signs and symptoms seen in pregnant women.

Treatment should be given for the quarters of the quantum of optimum measurement in cases of 3 - 5 months pregnant.

For seven to nine months, even if the impact is on *Thodu varmam* the grievousness will be half of the *Padu varmam*.

Moreover there are six *varmam* Internally (*Ull varmam*)

Ull Varmas

Table No. IX

1. Anandavaypu kalam	4. Perum varmam
2. Uthira kalam	5. Virachi varmam
3. Perum varmam	6. Aamba varmam

As per the most widely accepted classification they are segregated into *Padu varmams* and *Thodu varmams* based on the fatality of the injuries. The *Padu varmams* are 12 in number. They are the most vital. The *Thodu varmams* are 96 in number.

Of these 24 *varmams* are above the neck, 25 in between the neck and umbilicus. 12 *varmams* are between the umbilicals and coccyx. In the

upper extremities there are 11 *varmams* and 24 in the lower extremities.

Padu varmam

Padu varmams are otherwise termed as vital life centres. They are of two types one based on collection (*Thirattu*) and other based on *soothiram* (Stratagem).

According to *Varma Sutram* the *Padu varmams* are 12 in number but the actual number seems to be 18.

Odivumurivu-15, divides the varmam into physical and sensory as regards location. The five sense organs, the *Ida*, *Pingala* and *Sushumna* together form the *udarkalai*. the passage of urine, motion, semen and tears forms the *uyirkalai*. The twelve seats of the *uyirkalai* and *udarkalai* forms the basis of the 12 *Padu varmam*.

The difference between the *Padu varmam* and the *Thodu varmam* is that the *Padu varmam* are generally injured due to accidents while the *Thodu varmam* are generally injured by inflictions by others.

Even though there is an unanimity in the number of *Padu varmam*, different texts have different descriptions regarding the details of the *varmam*. Out of the various available sources of

information some classify the *Padu varmam* in 12 and some classify this into 13.

Under the heading *Padu varma Pannirendu* the *Varma Sootcham* describes 13 *varmas*.

Varma Kannadi describes 108 *varmam* and not *Padu varmam* and *Thodu varmam*. However we will be able to identify 13 *padu varmam*.

Varma Soottiram refers to *Natchatira kalam* as *Meena varma*. The difference in nomenclature by virtue of its meaning make us locate the site easily. This is not possible always. (*Varma Cuttiram*)

A detailed chart regarding the list of *Padu varmam* are given in the appendix.

Efforts have been made to standardize these *varmam* points with upto date scientific parameters.

1 *Angula* is 2.5 cms (Chidambara Thanu Pillai on *Padu varma thirattu*)

Measurement of impact

Table No. X

Life centres	British System	Metric System
1. Thilartha Kala	12"	31 Cms.
2. Nakshathira Kala	13.5"	35Cms.
3. Sevi kutri Kala	04"	10 Cms.
4. Pidari Kala	27"	70 Cms.
5. Urakka Kala	09"	23 Cms.
6. Thummi Kala	16"	41 Cms.
7. Koombu Varma	12"	31 Cms.
8. Adappa Kala	27"	70 Cms.
9. a. Valiya attisurukki Kala	27"	70 Cms.
b. Seriya attisurukki Kala	27"	70 Cms.
12.Urummi Kala	27"	70 Cms.
13.Mothira Kala	13.5"	35 Cms.
14.Kallidai Kala	18"	46 Cms.

Thoduvarmams

To tabulate the 96 *Thodu varmam* according to various authors is almost impossible as each text has its own style of classification. Effort has however been made to tabulate all those (295) available names of *Thodu varmam* and also the most commonly accepted 96 *Thodu varmam*.

Thodu varmam Thirattu has 69 names. Out of which *Adarakkalma*, *Ullvarmam*, *Odikki varmam*. *Peibhootha varmam*, are of six stages. Totally

there are 27 extra *varmam*. Adding these two will lead to 96 *Thoduvarmam*.

Another problem is that the *muladharam, swadhistanam, anahatha, vishudhhi* which has six stages are not explained.

Thoduvarma Thirattu says that there are 8 stages of of *Thattu varmam*. But the names were not mentioned.

Table No. XI

1. Mookku varmam	1	18. Villanki varmam	1
2. Chirchu varmam	1	19. Thasi	1
3. Pyya varmam	1	20. Chulukku varmam	2
4. Thudy varmam	1	21. Moti varmam	4
5. Mudanthu varmam	1	22. Thuttykani varmam	2
6. Koompu varmam	1	23. Thhana varmam	2
7. Koottu varmam	8	24. Kavali varmam	8
8. Manu varmam	8	25. Patakkal varmam	2
9. Mundal varmam	1	26. Thundayil varmam	6
10. Moothira varmam	1	27. Kalil varmam	12
11. Thandu varmam	1	28. Kutharaimukham Varma	2
12. Aanda varmam	1	29. Komperi varmam	2
13. Chuzhiyadi varmam	1	30. Kogayenny varmam	2
14. Chankuthiri varmam	1	31. Pathachakram varmam	2
15. Poottal varmam	1	32. Thichy varmam	2
16. Ulavarmam varmam	3	33. Bhoomy varmam	2
17. Alukad varmam	2	34. Adakkam varmam	2

Total 96

In *Kulabhyasa* system of *marma* there are 64 *marmas* having 37 names.

Regional Classification

Table No. XII

Head	8
Neck	5
Chest	6
Back and Sides	4
Lower Abdomen and Genitals	3
Hands	6 Each
Legs	6 Each
Total	37

Head

Table No. XII-a

1. Trikoodakyam	1	2. Sirasrayam	2
3. Mookkadappan	2	4. Kannunthi	2
5. Vathurappan	2	6. Chirikodan	2
7. Nakkutharippan	1	8. Vayuchinni	1

Neck

Table No. XII-b

1. Trikoodakyam	1	2. Sirasrayam	2
3. Nakshathrum noki	1	4. Chumayan	1
5. Muradanakki	2	6. Kazhuthukochi	1
7. Kazhuthuthookky	2		

Chest

Table No. XII-c

1. Thrisankhupuspan	1	2. Thilakuzhi	1
3. Raktamthuppi	4	4. Lohitham	2
5. Swasamadappan	2	6. Nooluvalippan	2

Back and Sides

Table No. XII-d

1. Tharippan	2	2. Kondakolli	2
3. Attachurutti	2	4. Urakkamthookky	1

Abdomen and Genital

Table No. XII-e

1. Malapandam	1	2. Jalapandam	1
3. Orulumani	1		

Upper Extremity

Table No. XII-f

1. Phanam	2	2. Kaithookky	2
3. Kaithalarpan	2	4. Kaikazhappan	2
5. Nadipathy	2	6. Viralooni	2

Lower Extremity

Table No. XII-g

1. Odukku valippan	2	2. Anavari	2
3. Nilari	2	4. Nadathalarpan	2
5. Vayupodi	2		

The Concept of Trimarmeeya

The *Trimarma* concept was put forwarded by *Charaka*. In his book he has dedicated two chapters to this namely *Trimarmeeya Chikitsa* and *Trimarmeeya Sidhi*.

Among the one hundred and seven *marmas* in the body *Charaka* maintains that *Hridaya*, *Vasthi* and *Siras*, as the most important. They are the main seats of *prana*, and hence when they are injured, it will affect the *prana* thereby vitiating the humours.¹

Chakrapanidutta comments that injuries on these vital organs affects the *prana* as it is seated here. He compares this to *the destruction of wall paint which occurs simultaneously when the wall is destroyed*. Any destruction to any of these three vital organs will destroy the *prana* and also could turn fatal or cause irreparable damage.²

In *Sidhisthana*, *Charaka* emphasises the importance of these three *marmas* in relation to other *marmas*. He says that there are one hundred and seven *marmas* including the *shakhas* and the *skandha*. Here the term *skandha* represents *antaradhy* and the *sira*. He says that pain will be felt more in these parts when

injured than that of any other part of the body. This is because the *chetana* is seated in this area.³ Here also *Charaka* describes *siro marma* as one.

So among the 107 *marmas* this could be subdivide into *skanda marma* and *shakha marma*. The *skanda marma* represents the *marmas* of the *koshtas*, *prishtha*, *ura* and *jatruurdhwa*. The *sakha marma* represents the *marma* points seen in *bahu* and *sakthi*. The *skanda marma* are more important than the *sakha marma*. Injury to the *skanda* affects the *sakhas* as they are attached to the *skandha*. *Chakrapanidutta* explains this as follows, compared to the *shakha marmas*, the *skanda marma* being the substratum of the former are of relatively greater importance. The *trimarmas* among them, by virtue of their important role in over all body mechanism are far more important.⁴

The *sadya pranahara marma* enumerated by *Susrutha* and *Vaghbata* are *skandhashraya* and not *shakhashraya*. Hence care should be given more to *skandasraya marma*.

The *sadya pranahara marmas* are *Nabhi*, *Vasthi*, *Hridaya*, *Sankha*, *Adhipa*, *Sringataka* and *Matruka*. If this is further classified it is seen that these *marmas* are mostly *siro marmas*. *Hridaya* is a *uro marma*. *Nabhi* and *guda* is a *koshta marma*. There is no

sakha marma seen which clearly states that these *skandha marmas* are more vital than the *sakha marmas*. Among the *skandha marmas* the three *marmas* namely the *sira* the *hrdaya* and the *vasthi* are the most important. This is because they are said to be the the *moola* of the body.⁵

In *Ashtanga Hrdaya*, *Vaghbata* says that there are ten *Jeevitha dhamas* namely *Sira*, *Rasanabandhanam* (posterior part of the tongue) *Khanda*, *Raktha*, *Hrdaya*, *Nabhi*, *Asthi*, *Sukra*, *Oja* and *Guda*.⁶

Here it should be noted that these are not *marmas*. However the *Acharya* in else where context consider these as playing a very prominent role in the maintainance of body.

But one thing is sure that these function only when the *hrdaya* functions.

Chakrapanidutta on *Charaka Sidhi*. Ch. 9 comments that even though the *sankha* do have very prominent role this could not be considered as the most important because they are not the *ashraya* of the body they are only *pranayathana* while *hrdaya*, are not only *pranayathana* but also *asraya* of the body.⁷

1. Siras

The *siras*, being the nerve centre governing all nervous activity of the body commands a position of paramount significance. It is intimately related to the sense of perception and is the centre of *Prana* as well. It is therefore justified being spoken as *Uthamanga*.⁸

It is the principal site for the formation of *kapha*. In fact the very term *kapha* is indicative of its origin in the *siras*.⁹

The body is considered as a tree, upside down. Comparing the root as *sira* and appendages as branches throws light on the importance of *siras*.¹⁰

Being the centre of the *prana* and the *indryas*, it is to the body what the sun is to the sky.

2. Hridaya

Apart from the seat of *prana* it serves the seat of *Para-ojus*. The *apara ojus*¹¹ which transverses all over the body is also centred in the *hrdaya*.¹² More over this is the root of *pranavaha srothas* in one hand and *Rasavaha srothas* on the other hand.^{13,14}

By virtue of its being the centre of various physiological activities in the body this *marma* holds unenviable significance among other *marmas*.

It is for this reason that *Charaka* compares the *hrdaya* to the axle of wheel on which different spokes are attached in such a way that the break down of the axle invariably means the collapse of the wheel or rather the cart itself. The spokes here is referred as *dasa dhamani, prana, apana, manas, budhi, chethana*, as well as *mahabhuthas*.¹⁵

Herein *Chakrapanidutta* explains that *prana* and *apana* are nothing but inspiration and expiration. Here he says that *mahabhutha* referred here is *sookshma bhutha* related to *Atma*.¹⁶

Realising the paramount significance of *Hridayabutha* in materialistic and philosophical arena *Sri Ramana Maharshi* has stated that the *Hridaya* is the very embodiment of the whole body.¹⁷ He further states that in macrocosm, *soorya mandala* is the centre and in microcosm, the *hrdaya* is the centre.

As Dr. Banerjee in his book *The nervous system, Indian Philosophy* has observed. The term *hrdaya* is used in different context to mean different entities. However *hrdaya* means one of the following.

- a. Place of *Atma* (Soul) and *Chethana* (Consciousness).
- b. Place of *chitha* (Feeling) *Cheta* (Knowledge).
- c. Place of all sense of perception.
- d. Place of all intellect.

- e. Place of life.
- f. Place of sleep.
- g. Place of memory.
- h. Place of nerve.

3. Vasti

This is situated in a very strategic position between the rectum scrotum and the perineum. The channels of urine, semen and the prominent role it plays in the fluid metabolism bestows a prominent role among the other *marmas*.

The term *vasthi* is derived from the root *Vas Achadane* meaning to cover. *Vasthi* is a thin film of tissue, the function of which is to cover or contain urine. Its proximity to the peritoneal cavity and probably the rapid spread of infection on rupture and also its slow rate of healing are the challenges the surgeon faces during operative intervention.

To sum up it should be noted that though there are 107 *marma* points spreaded all over the body, the *marma* points seen on the *siras*, *hrdaya* and *vasthi* need more care and stress while treating an injury.

Another point worth realising is - *Charaka* classification was done on the light that he himself was more a physician than a surgeon. Hence stress over the *Trimarma* should be on medical treatment rather than the surgical treatment.