

A CONCEPTUAL ANALYSIS OF MARMA CHIKITSA IN GRIDHRASI

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ABSTRACT

Gridhrasi is one of the most troublesome *Vyadhi* with commonest complain of lower backache with or without radiating pain to unilateral/ bilateral lower legs. The symptomatology of the disease *Gridhrasi* closely resembles Sciatica in Allopathy system of Medicine. *Gridhrasi* is a shoolpradhan disease categorized into two types i.e. Vataj and Vatakaphaj according to Ayurvedic texts. Pain is of major concern in this *Vyadhi* as it is not only unbearable but also causes hindrances in daily routine work. The probability of occurrence of the disease increases with age, obesity, smoking or sedentary lifestyle. Its increasing prevalence today needs an effective management with

immediate and long lasting results. Hence Marma chikitsa which is an alternative technique of Ayurved can be advised in such patients. Multiple sittings are required for better results. Acute or Chronic; mild, moderate or severe cases of *Gridhrasi* can be treated with marked improvements. In this study emphasis is laid upon five specific Marma points (or energy points) for management of *Gridhrasi* by considering the related literature. This conceptual study may prove beneficial in clinical and surgical point of view.

KEYWORDS: *Gridhrasi*, *Marma Chikitsa*, Sciatica, Energy points.

INTRODUCTION

Gridhrasi is one of the *Nanatmaja Vata Vyadhi* having vitiation of *Vata* and sometimes *Vata Kapha Dosha*, which starts from *Gridhrasi Nadi*.

“स्फिक्पूर्वा कटिपृष्ठोरुजानुजन्धापदं क्रमात्। गृध्रसी स्तम्भरुकोदैर्गृह्णाति स्पन्दते मुहुः॥

वाताद्वातकफात् तन्द्रागौरवारोचकान्विता॥”(च० चि०२८)

That means, “ In *Gridhrasi*, pain starts from *Sphika* (buttocks), radiates insidiously towards *Kati*(waist), *Pristha* (back) then *Uru* (thigh), *Janu* (Knee), *Jangha* (Calf) and *Paada* (Foot).^[1]

The critical busy schedule, frequent change in lifestyle, environmental factors, climate, restlessness, anxiety, stress and strain, constant work schedule, improper sitting posture, continuous & over exertion, prolonged travelling, lack of sports related activities or exercises, etc. which in fact exerts undue pressure on lumbosacral spine and produces low backache that may further lead to prolapsed intervertebral disc. If this persists for a prolonged period then it may develop into *Gridhrasi*/ Sciatica.

A common cause of Sciatica is herniation of disc (prolapsed disc) leading to compression of nerve fibres.^[2] The cause may be injury or trauma or pregnancy or also often the result of years of bending and sitting for long duration in incorrect posture.

Gridhrasi has become one of most common health problems in our day to day clinical practice. Though the disease is present in leg, it disturbs the daily routine and overall life of the patient. It affects the physical, mental and social life of the patients. At present it is affecting mostly the people of age group 30-60 yrs and it is expected that about 40% of the people will get affected by it at some point during their lifetime. In about 90% of cases Sciatica is caused by a herniated disc. In modern medical science the recommended surgical treatment for Sciatica is Discectomy or Microdiscectomy, Laminectomy or Laminotomy. But the long term effects of surgical intervention are unclear and evidences on optimal timing of surgery is also lacking. However it may provide quicker relief from leg pain than conservative care but post operative recurrence is reported in several cases just after 1 to 2 years.^[3]

Hence there is a need to find out immediate relief from *Gridhrasi* and to avoid repeated surgeries, a conceptual study of *Marma Chikitsa* has been analysed. *Marma* Therapy is thought to provide significant relief by its specific mode of action in *Gridhrasi*. Hence the present study is being undertaken to find out the most effective method to treat the disease.

Philosophical aspects of *Marma Chikitsa*^[4]

The theoretical foundation of *Ayurveda* depends on the ancient philosophical school *Sankhya system*. *Sankhya* system proclaims two ultimate universal principles named *purusha* and *prakruti*. Union of *prakruti* and *purusha* is responsible for the origin of the universe. *Purusha* is the pure *prakruti*. It is the pure consciousness or realisation of the higher self which vanishes the pains and sufferings by breaking of bonds known as *karman bandhans*.

There are three *doshas*/ humour i.e. *vata*, *pitta* and *kapha* (*Shareerik dosha*) in human body. These control metabolism of body. Similarly mind consists of *trigunas* i.e. *sattva*, *rajo*, and *tama* (*Maansik dosha*) like three *doshas*. There are other body factors such as *saptadhatu* and *mala* which contribute to metabolism. In a normal healthy individual all the above factors like *Shareerik dosha*, *Maansik dosha*, *saptadhatu* and *mala* are in balanced state. The imbalance of these *doshas* results in disease or we can say any malfunctioning in the *dosha-datu-mala* will ultimately develop disease. Since *doshas* are related with *triguna* so any type of changes in mental constitution will cause disease. Somatic and psychosomatic disease are thus originated by the invariable relationship of *Panchamahabhoota*, *tridosha* and *triguna*.

When the body systems function properly the *pranasakti* or *prana* (vital force) circulates through body and this *prana* is said to be concentrated on *Marma* points. This may be the reason for *Marma* to be fatal or causing severe pain or disability when injured.

Life energy or *Prana*^[5]

Prana is the vital force of life energy that circulates throughout the body. According to *Maharshi Sushruta*, *Marmas* are the seats of *prana*. The word *prana* refers to *agni*, *soma*, *vayu*, *sattwa*, *raja*, *tama*, *bhutatma* and *panchnendriya*. The *tridosha*, *triguna* are the fundamental factors- which when in their normal state, circulates *prana* all over the body, and *marma* being the seats of *prana* are considered as the most important vital spots in the body.

When non-living body (*jada*) composed of *panchamahabhootas* or five elements combines with *atma* or *prana*, the *chetana* occurs. When death occurs, the *prana* is lost and *jada* retains which is the dead body. Again, dead body results into five subtle elements and returns to the universe.

Shareera with *prana* or *atma* is described as *purusha* who needs the treatment. All 13 principles (3 *dosha*, 3 *maansik guna*, 7 *dhatu*s) along with mind and *atma* when coexists in

harmony, constitutes health. Any disturbances in these factors may deviate towards ill health. The force which sustains life is *prana*. Its quality or strength determines the life span. When *prana* force is feeble the vitality of the person diminishes. Such conditions occur in diseases. But when *prana* is lost, death occurs. So it is clear that *prana* is the factor essential for healthy living.

There are various forms of *Prana*. One form is *agni* which sustains life by *parinamam*, next the-Soma by *poshanam*, and the third the *Vayu* by *chalanam* (movements-functions). Others are *Satwa*, *rajas* and *tamas*. *Panchnendriya* by their sensory perceptions and *bhutatma* by its animating nature. In *marma* all these factors except *panchnendriya* are present.

Marmas are classified in various categories by Maharshi *Susruta*. One category is *Agneya*, *Soumya* and *vayavya* types which are related to the *tridoshas*(*vata*—*vayavya guna*, *Pitta*—*agneya guna*, *Kapha-Soumya guna*). The properties of *doshas* predominant among *marma* make it *sadyopranahara* (causing instant death), *kalantarapranahara* (delayed death), *Vaikalyakara* (causing disability) etc. *Agni* is the factor which causes sudden or fast response among *Marma* when traumatic injury or disturbance occurs. If *vayu* is present, it will cause pain. The *soma* will cause *vaikalyakarata* by derangement in trauma.

Probable mode of action of *Marma Chikitsa*

Marma Therapy is the precise art of touching an individual in exactly right place at a critical moment of time.^[18] It is an important tool of *pranic* healing. *Prana* in turn is connected with *Vata dosha*, which relates to deep seated, chronic and degenerative diseases like *Gridhrasi*. It is one of the safest, non invasive, and cheapest therapy of all. Also this therapy has no side effects and no any preparation is required before therapy. It even satisfies the *Sushruta's* concept of "*Hastamaeva pradhantamam yantram*". By the use of appropriate pressure over these *Marma* points, these vital and powerful points can be stimulated leading to biochemical changes in brain as well as in the body, resulting in suppression of the symptoms like pain, stiffness, numbness etc. The result is supposed to be immediate and long lasting.

TECHNIQUE OF MARMA THERAPY^[6]


Five *Marma* points can be used bilaterally *Kshipra*, *Gulf* and *Indrabasti* selected from lower limb (*Adhoshakhagata Marma*) whereas *Kukundara* & *Katiktaran* selected from back (*Prusthagata Marma*).

The stimulus can be given with the **pulp part of the thumb** or **finger's lateral border** of the knuckle on corresponding *Marma* points in each sitting.

Total 3 sittings are advised in a day i.e. morning, daytime and evening with periodic rhythm. Rhythm may be compared with that of respiration. The *Marma* points are pressed 20 times in a single sitting. The position for *Marma* point stimulation should be supine and prone positions. It can be followed in daily routine by learning self stimulation techniques by the patient.

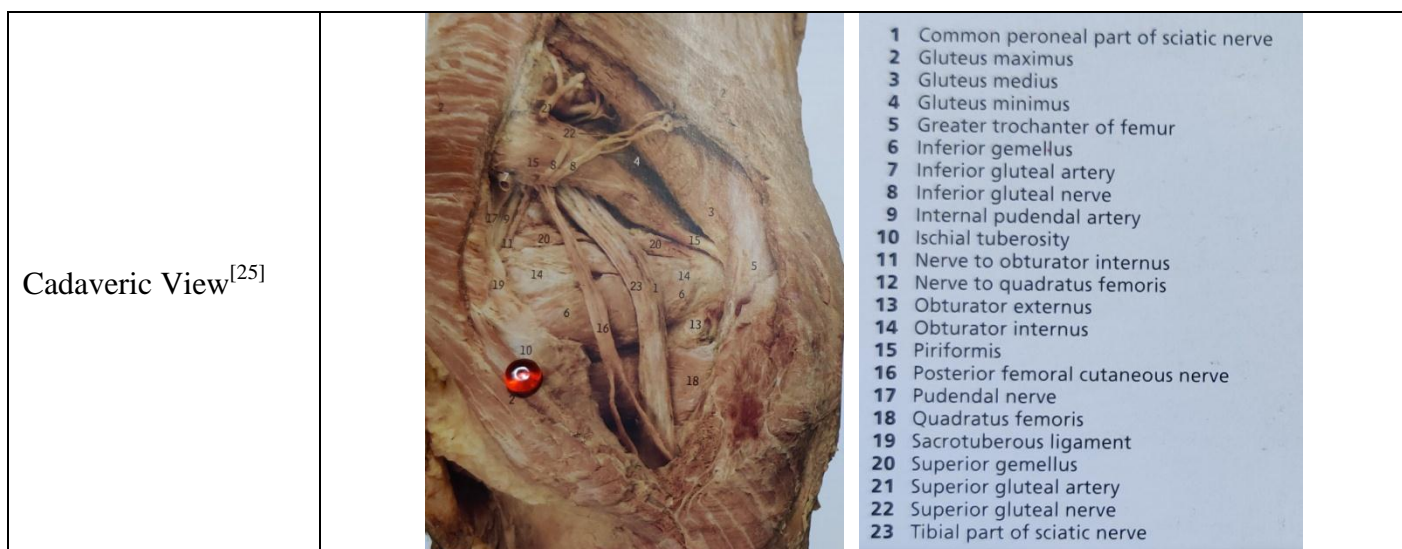
1) KUKUNDARA MARMA

LOCATION	on both sides of 'Pristavamsha' on 'Jagana Bahirbaghaga' ^[7] i.e. On both posterior superior iliac spine notches, just above buttocks (inside or spinal area of the hip bone). J.N Mishra - lightly below and on the lateral flanks of the hip bone. ^[8] Ghanekar - in vulnerable area surrounded by bony prominence like ischial tuberosity, greater trochanter and iliac crest/ interpreted <i>Kukundara</i> as ischial tuberosity. ^[9] Rasayogasagar - <i>Kukundara</i> is interpreted as anterior superior iliac spine. ^[10]				
ANATOMICAL STRUCTURES	Mamsa (muscles)-Gluteus Maximus, Gluteus medius, Gluteus minimus, Piriformis, Obturator internus; Sira (vessels and nerve)-Superior gluteal vessels & nerve, Inferior gluteal vessels & nerve Internal pudendal vessels & nerves, Sciatic nerve, nerve to quadratus femoris, nerve to piriformis, nerve to obturator internus Snayu - Sacrotuberous ligament, Sacrospinous ligament, Sacroiliac ligaments; Asthi (bones)- Sacrum, Ilium; Sandhi (joints)-Sacroiliac joint. ^[11]				
ACTION ON DOSHAS	<i>Ranjak Pitta, Vyan Vaayu.</i> ^[12]				
VIDDHA LAKSHANA	"sparshaagyanam adhakaye cheshtaopaghatha" ^[13] i.e. loss of movement and loss of sensation of lower limb (sciatic nerve injury can be predicted)				
MARMA CLASSIFICATION BASED ON ^[14]	Structure or body organs involved	Consequences of trauma over <i>Marma</i> area	Area or size of <i>Marmas</i>	Sites and locations of <i>Marmas</i>	<i>Sankhyas</i> of <i>Marmas</i>
	<i>Sandhi Marma</i>	<i>Vaikalyakar</i>	<i>Ardhangula</i>	<i>Pristha</i> (back)	2
CONTROLS ^[15]	Circulatory system and blood formation (<i>Raktavaha Srotas</i> and <i>Rakta Dhatu</i> formation) and <i>Ranjaka Pitta</i> (coloring of the blood) as well as the menstrual system. Also relates to the second or sex <i>chakra</i> (<i>Svadhishtana</i>), <i>Ojas</i> and <i>Apana Vayu</i> .				
Cadaveric View ^[16]					

		<ol style="list-style-type: none"> 2. Anal sphincter 3. Biceps femoris, long head 4. Gluteus maximus 5. Gracilis 6. Ischio-anal fossa 8. Levator ani 13. Sciatic nerve trunk 14. Semimembranosus 15. Semitendinosus 16. Vastus lateralis
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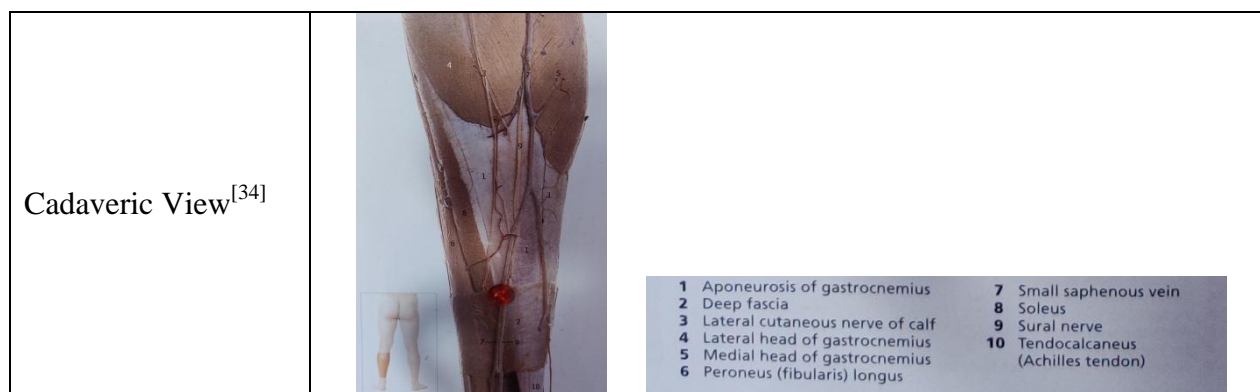
2. KATIKATARUNA MARMA

LOCATION	<p>“<i>Prishavanshamubhayatah pratisronikandamasthini</i>”^[17] i.e. On both sides of Vertebral Column corresponding to each hip bone. Dr. David Frawley-At the hip joint. Located two and a half <i>anguli</i> (finger units) downwards and inwards from the greater trochanter of the femur, the line joining the greater trochanter with the ischial tuberosity (midline between the greater trochanter and ischial tuberosity superficial to the zona orbicularis)^[18]</p>				
ANATOMICAL STRUCTURES	<p>Posterior aspect of ileum, sacroiliac ligaments. Superior Structures gluteal artery and vein. Drainage of common iliac lymph glands. Sacral plexus of nerves. Gluteus maximus muscle.^[19] Ligaments:- Anterior Sacro Iliac; Posterior sacro-iliac; Interosseous sacro-iliac. Blood vessels:- External iliac artery & vein; Hypogastric artery. The Point of sacroiliac joint where internal iliac vessels pass.^[20]</p>				
ACTION ON DOSHAS	<p><i>Shleshak kapha, Vata</i>^[21]</p>				
VIDDHA LAKSHANA	<p>“<i>shonitkshayaat paanduvivarno heenroopascha mriyate</i>”^[22] i.e. Pallor, discoloration of skin due to haemorrhage or loss of blood, disfiguration of body and ultimately death.</p>				
MARMA CLASSIFICATION BASED ON ^[23]	Structure or body organs involved	Consequences of trauma over Marma area	Area or size of Marmas	Sites and locations of Marmas	<i>Sankhyas of Marmas</i>
	<i>Asthi Marma</i>	<i>Kalantara Pranahara</i>	<i>Ardhangula</i>	<i>Pristha</i> (back)	2
CONTROLS ^[24]	<p>bones and skeletal system (<i>Asthivaha Srotas</i>), <i>Sleshaka Kapha</i> (lubrication of the joints) and <i>Swedavaha Srotas</i> (sweat glands). Relieves <i>Vata</i></p>				




3. INDRABASTI MARMA


LOCATION	<p>“<i>paarshni prati janghamadhye</i>”^[26] i.e. in the mid of leg in the line of heel or calcaneum.</p> <p>“<i>Paarshni prati trayodashaangule sthitam</i>”^[27] means it is situated 13 <i>angulas</i> away from <i>parsni</i> (calcaneum).</p> <p>Acharya Gananath Sen in Pratyaksha Shareer has given it another name “<i>Jangha Pinda</i>”.</p> <p>Dr. David Frawley- (Indra's arrow or a superior type of arrow; owing to the shape of the muscles in the region of the mid-lower leg. <i>Basti</i> also means bladder in other contexts).^[28]</p>				
ANATOMICAL STRUCTURES ^[29]	<p>MAMSA – Gastrocnemius (2 heads), Soleus</p> <p>SIRA - Small saphaneous vein, sural nerve, Posterior tibial artery & Tibial nerve</p> <p>SNAYU - Plantaris & Interosseus membrane</p> <p>ASTHI – Tibia, Fibula</p> <p>SANDHI - Synchondrial joint between tibia & fibula (Tibiofibular joint)</p>				
ACTION ON DOSHAS ^[30]	<i>Paachak Pitta, Saman Vaayu</i>				
VIDDHA LAKSHANA	<p>“<i>shonitkshayena maranam</i>”^[31] i.e. an injury to this <i>Marma</i> point results in excessive loss of blood which ends in death.</p>				
MARMA CLASSIFICATION BASED ON ^[32]	Structure or body organs involved	Consequences of trauma over <i>Marma</i> area	Area or size of <i>Marmas</i>	Sites and locations of <i>Marmas</i>	<i>Sankhyas</i> of <i>Marmas</i>
	<i>Mamsa Marma</i>	<i>Kalantara Pranahara</i>	<i>Ardhangul-Sushruta Dwiangula-Bhoja & Gayadas</i>	<i>Adhoshakha gata Marma</i>	4
CONTROLS ^[33]	Digestive system (<i>Annavaha Srotas</i>), <i>Agni</i> (digestive fire), <i>Pachaka Pitta, Samana Vayu</i> , and small intestine.				



4. GULPHA MARMA

LOCATION	“Paadjanghayoh sandhane” ^[35] It is situated at the junction of Pada (foot) and jangha (leg). It includes distal tibiofibular joint and talocrural joint.				
ANATOMICAL STRUCTURES ^[36]	MAMSA - Peroneus longus, Peroneus brevis, Superior peroneal retinaculum. SIRA - Perforating branch of fibular artery and fibular nerve. SNAYU - Lateral ligament of the ankle which consists of three separate ligaments- Anterior talofibular ligament, calcaneofibular ligament, Posterior talofibular ligament. ASTHI - Tibia, lateral malleolus of fibula and talus. SANDHI - Joint between tibia, fibula and talus.				
ACTION ON DOSHAS ^[37]	Shleshak kapha, Vyana Vayu				
VIDDHA LAKSHANA	“Rujah stabdhapaadata khanjata vaa” ^[38] i.e. Injury to <i>Gulpha Marma</i> causes pain, rigidity or limping of foot.				
MARMA CLASSIFICATION BASED ON ^[39]	Structure or body organs involved	Consequences of trauma over <i>Marma</i> area	Area or size of <i>Marmas</i>	Sites and locations of <i>Marmas</i>	<i>Sankhyas</i> of <i>Marmas</i>
	<i>Sandhi Marma</i>	<i>Rujakara Marma</i>	<i>Dwaya angula</i>	<i>Adhoshakha-gata Marma</i>	2
CONTROLS ^[40]	Fat, bone and reproductive systems (<i>Medovaha, Asthivaha and Shukravaha Srotas</i>), Vyana Vayu (circulation of <i>Prana</i>), <i>Sleshaka Kapha</i> (lubrication of the joints) and movement of the feet				
Cadaveric View ^[41]	<div><div><div>1 Abductor hallucis</div><div>2 Extensor hallucis longus</div><div>3 Flexor digitorum longus</div><div>4 Flexor hallucis longus</div><div>5 Flexor retinaculum</div><div>6 Inferior extensor retinaculum (lower band)</div><div>7 Inferior extensor retinaculum (upper band)</div><div>8 Medial calcaneal nerve</div><div>9 Medial malleolus</div></div><div><div>10 Medial surface of tibia</div><div>11 Plantaris tendon</div><div>12 Posterior surface of calcaneus</div><div>13 Posterior tibial artery and venae comitantes</div><div>14 Soleus</div><div>15 Tendocalcaneus (Achilles tendon)</div><div>16 Tibial nerve</div><div>17 Tibialis anterior</div><div>18 Tibialis posterior</div></div></div> 				

5. KSHIPRA MARMA

LOCATION	“Paadasyangushthangulyormadhye” ^[42] In between the big toe and the second toe (web between the first distal phalangeal joint and the second medial phalangeal joints of the foot).																								
ANATOMICAL STRUCTURES ^[43]	Mamsa First Dorsal Lumbrical Sira - Dorsalis Pedis Artery & Deep Peroneal Nerve Snayu - Tendons of Extensor Hallucis Longus, Extensor Hallucis Brevis, Metatarsal and Intermetatarsal ligament Asthi - 1st & 2nd Metatarsal Bone, Distal Phalange & Sesamoid Bone Sandhi - 1st & 2nd Metatarsophalangeal Joint Adductor hallucis bravis and lumbrical muscles. Posterior tibial nerve. Dorsal metatarsal artery, plantar arch and medial plantar artery. Metatarso-phalangeal joint.																								
ACTION ON DOSHAS ^[44]	Avalambaka kapha																								
VIDDHA LAKSHANA ^[45]	“Viddhasyaakshepane maranam” Causes death, due to convulsions in due course of time The Marmaghata Lakshana of Kshipra Marma is Marana (death) ensued by Akshepa. Injury may impair the functions of adduction and flexion of the great toe. Damage to the artery may cause bleeding, hematoma inside the plantar aponeurosis and toxemia.																								
MARMA CLASSIFICATION BASED ON ^[46]	Structure or body organs involved	Consequences of trauma over Marma area	Area or size of Marmas	Sites and locations of Marmas	Sankhyas of Marmas																				
	Snayu Marma	Kalantara Pranhar Marma	Ardhangula	Adhoshakha-gata Marma	2																				
CONTROLS ^[47]	Controls lymphatic and respiratory systems (Rasavaha and Pranavaha Srotas), Avalambaka Kapha (lubrication for heart and lungs) and heart and lungs overall.																								
Cadaveric View ^[48]	 <table><tr><td>1 Arcuate artery</td><td>11 Fourth dorsal interosseous</td></tr><tr><td>2 Digital arteries</td><td>12 Peroneus (fibularis) tertius</td></tr><tr><td>3 Dorsalis pedis artery</td><td>13 Second dorsal interosseous</td></tr><tr><td>4 Extensor digitorum brevis</td><td>14 Second dorsal metatarsal artery</td></tr><tr><td>5 Extensor digitorum longus</td><td>15 Tarsal arteries</td></tr><tr><td>6 Extensor hallucis brevis</td><td>16 Third dorsal interosseous</td></tr><tr><td>7 Extensor hallucis longus</td><td>17 Tibialis anterior</td></tr><tr><td>8 First dorsal interosseous</td><td>18 Tuberosity of base of fifth metatarsal and peroneus brevis</td></tr><tr><td>9 First dorsal metatarsal artery</td><td></td></tr><tr><td>10 First metatarsophalangeal joint</td><td></td></tr></table>					1 Arcuate artery	11 Fourth dorsal interosseous	2 Digital arteries	12 Peroneus (fibularis) tertius	3 Dorsalis pedis artery	13 Second dorsal interosseous	4 Extensor digitorum brevis	14 Second dorsal metatarsal artery	5 Extensor digitorum longus	15 Tarsal arteries	6 Extensor hallucis brevis	16 Third dorsal interosseous	7 Extensor hallucis longus	17 Tibialis anterior	8 First dorsal interosseous	18 Tuberosity of base of fifth metatarsal and peroneus brevis	9 First dorsal metatarsal artery		10 First metatarsophalangeal joint	
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DISCUSSION

The anatomical description mentioned above has been derived from various texts. However no clear cut description is available on Marma chikitsa in any of the Ayurved Samhitas but

still an attempt has been made for the review. On the basis of literature available on Marmas a clinical and anatomical study can be defined in a much easier way. Different author has different perspectives on Marma points and its anatomical site. These sites must be identified properly during Marma chikitsa for better results. The pressure applied must be high enough to stimulate it.

CONCLUSION

The conclusion of entire study is Marmas mentioned in Ayurved are of great importance for clinical and surgical point of view. The study on various Marmas need further analysis on basis of neurological parameters. These points can never be ignored in our treatment. These energy points must be brought to our concern while practicing. In context of Gridhrasi restrospective study of Marma chikitsa need further research. Direct stimulation takes place through direct pressure of Marma (energy) points hence gives immediate results. This chikitsa is quite palliative, easy and cost effective for the patient. A certain degree of tolerable pain is however felt by the patient during the Therapy. This pain is temporary and vanishes as soon as the therapy is withdrawn.

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