

ACCOMPLISHMENT OF VITAPA MARMA IN THE LIGHT OF MODERN SCIENCE

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ABSTRACT

Main prayojana (aim) of holistic Ayurvedic science is 'Swatharakshana'(to maintain homeostasis) and 'vikarprasham' (to cure disease). The science of Marma is extraordinary and dynamic Ayurvedic therapy that has tremendous value in health, longevity, spiritual practice and diseases. Marmavigyana is a liveliest subject in Ayurveda because when we understand the secrets of marmas and correlate them with modern aspect many queries will be answered itself. *Vitapa* is *Adhoshakagata Vaikalyakara Marma of 1 Anguli Pramana*. It is a snayumarma that can be correlated with inguinal canal which is formed by Aponeurosis of external oblique. Contents of

Inguinal canal are spermatic cord in males and round ligament of uterus in females. Injury to the Vitapa Marma may be causes impotency that sign and symptoms may be seen due to injury on the spermatic cord and its contents in males and in female incompetence of round ligament of uterus can result in abnormalities of uterus, thus resulting in infertility. To extend the knowledge of Marma in clinical fields, it is necessary to know the actual structures present at those site. Thus this topic is selected to study the proper location with modern anatomy of this Marma and the structural involvement in injury causing Viddha Lakshanas specifically reproductive deformities as per Ayurveda.

KEYWORDS: Inguinal canal, Vaikalyakar, *Marma*, Spermatic cord, *Vitapa Marma*.

INTRODUCTION

Marmavigyaan is like a river of knowledge that requires systemic description of Ayurveda as well as modern anatomy with skilled dissection manner, after that we will enjoy the wave of this river. Acharya sushruta has explained “Marma Shareer” in “Pratyekamarmanirdeshasharir” and Vagbhata in “Marma vibhagam shariram”.

The word *Marma* is derived from the root ‘*MrungPranatyage*’ meaning, that which causes *Pranatyaga* or death^[1]

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rLekr~ eeZLofHkgrkaLrku~ HkkokukijUrs A
(lq++-“kk- 6/16)

Marma is the sites where there is the confluence of *Mamsa*, *Sira*, *Snayu*, *Asthi*, and *Sandhi*. *Prana* resides at these places especially by nature.^[2] These points are also known as *jeevasthanas* and *pranayatana*. Acharya Sushruta has also described that *Vatta*, *Pitta*, *Kapha* *Dosha* as well as *Sattva*, *Raja* and *Tama* along with *Soul*^[3], *Chetana dhatu*^[4] reside in *Marma*, Because of this trauma over the *Marma* causes severe pain. Injury to these areas causes exacerbation of *doshas* which can be destroy mind and body and finally results death. Acharya Vagbhata explained that sites which are painful on applying pressure and shows abnormal pulsation should also be considered as *Marmas*.^[5]

According to Ayurveda, the knowledge of position of *Marma* and *Marma abhigata* (injuries to vital points) symptoms is necessary before performing any Surgical treatment.^[6] There are 107 such vital points in our body. Acharya Sushruta has classified various types of *marmas* depending upon their sthan(position), rachana(costituents), viddhalakshanas (traumatic effect), parinam (prognosis), number and pariman (dimensions).

Under the consideration of consequences of trauma over *Marmas*, Sushruta has classified into five groups.^[7]

	Type of Marma	No. of Marmas
1.	SadyapranaharaMarma (immediate death after injury)	19
2.	KalantarapranaharaMarma (death after lapse some time)	33
3.	VishalyaghnaMarma (death soon after removing the Shalya)	3
4.	VaikalyakaraMarma (injury precipitating the restlessness)	44
5.	RujakaraMarma (injury causing severe pain)	8

Vitapa Marma is considered in *Vaikalyakar Marma*. The word 'vaikalyakara' is derived from 'vaikalya' means abnormality or deformity or disability to do something. '*Vaikalyakara Marma*' are the points where injury causes structural or functional deformity.^[8] These are 44 in numbers.^[9,10] They are *Kurch, Janu, Aani, Urvi, Lohitaksh* and *Vitapa* and injury to them cause symptoms which are very common in present world. *Vaikalyakara Marmas* are *Soma Guna* predominant, by the virtue of stability and cold qualities of the *Soma(Jala) Gunait* supports the *Prana*. So, injury to these *Marma* causes only deformity or *Vaiklya* but rarely grievous injury may cause death.

MATERIALS AND METHODS

Literary Review

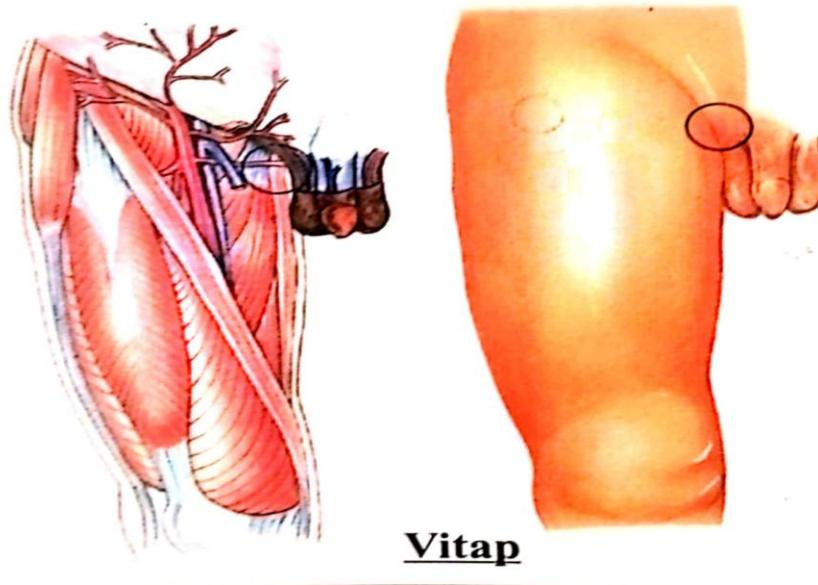
The word '*Vitapa*' is originated from '*Vitam Vistaramva Paati Pibati*' or '*Vetati-ShabdayateIti*' which mean branch of tree or covering of testis.

Location of Marma

Vitapa Marma is one among the 107 *Marma* and it is considered as one of the *Adha-Shakhagata Marma*.^[11]

According to Acharya Sushrut

वङ्क्षणवृषणयोरन्तरेवितपं नाम , तत्रषाण्डयमल्पाशुक्रतावाभवति।



Vitapa Marma is situated between Vankshan and Vrushana. While explaining the *Viddha Lakshana* of *Vitapa Marma*, *Sushruta* has mentioned *Alpa Shukrata* and *Shand*.^[12] *Vamkshana* is *Adhoshakagata Sandhi* that is situated at the root of Uru (thigh) or the junction of Udara and Uru. It is *Chala type of Ulukhala Sandhi*. At the root of penis there is a point which indicates the beginning of median raphe of the scrotum can be taken for the land mark of *Vrishana*, in case of females this point will be the midpoint between upper parts of two labia majora near the clitoris.

Vagbhata has mentioned its location in between *Muska* and *Vamkshana*.^[13] According to Acharya *Sushrut* *Vitapa Marma* is a *Snayu Marma*^[14] with dimension of one angula. *Vagbhata* has mentioned *Vitapa Marma* as *Sira Marma*^[15] It is considered as *Vaikalyakara Marma* on the basis of prognosis or impact of injury. *Dalhana* said that the pocket of *Anda* called *Mushka* which denotes *Andakosha*.^[16] *Arundatta* also said the same as the pocket of *Vrushana* is called *Andakosha*. Thus the term denotes *Scrotum*. So area between *Vankshan* and *Vrushana* is *Vitapa* and we can consider it *Inguinal Canal*.

Modern Co-relation

According to contemporary science that region is accompanied with inguinal region. In lower limb, vitapa marma should be correlated with inguinal canal, consisting of spermatic cord. The specific and dominant anatomical structure which will cause result of injury; should be spermatic cord in male and round ligament of uterus in female.

Anatomy of Inguinal Canal^[17]

This is an oblique passage in the lower part of the anterior abdominal wall, it is situated just above the medial half of the inguinal ligament. Extension of this canal is from deep inguinal ring to superficial inguinal ring. Length of canal is about 4 cm (1.5 inches), it is directed downwards, forwards and medially. The superficial inguinal ring is a triangular gap in the Apo neurosis of external oblique muscles.

IN MALES

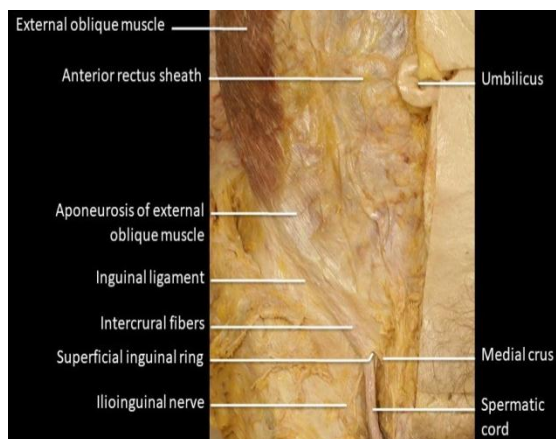


Figure 1.1

IN FEMALES

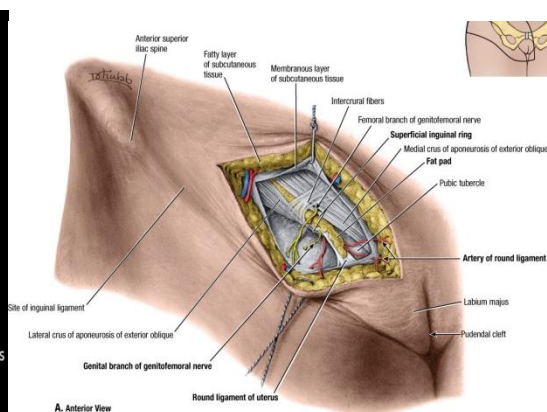


Figure 1.2

Structures passing through inguinal canal

Males	Females
Spermatic cord	Round ligament of the uterus
Ilioinguinal nerve	Ilioinguinal nerve
Genitofemoral	Genitofemoral

Spermatic cord^[18]

During foetal life the testis descends from the abdominal wall into the scrotal sac, it carries blood vessels, nerve and vas deferens with it. These structures meet at the deep inguinal ring to form the spermatic cord which suspends testis in the scrotum and extends from the deep inguinal ring to the posterior aspect of the testis. The left spermatic cord is a little longer than the right cord, between the superficial ring and testis, the cord is anterior to rounded tendon of adductor longus.

The constituent of the spermatic cord

- 1) Ductus deferens.
- 2) Testicular and cremasteric arteries and artery of ductus deferens.
- 3) Genital branch of genitofemoral nerve.

Round Ligament of Uterus

The round ligaments of uterus are two fibromuscular flat bands. Length of these ligaments are 10 to 12 cm. These are lie between the two layers of the broad ligament and antero-inferior to the uterine tube. Each ligament begins at the lateral angle of the uterus, it runs forwards and laterally and passes through the deep inguinal ring, traverses the inguinal canal and merges with the areolar tissue of the labium majus after breaking up into thin filaments.

The round ligament keeps the fundus part of uterus pulled forwards and maintains the angle of anteversion against the backward pull of the Utero-sacral ligaments.

Blood supply- The round ligament receives blood from Sampson's artery which is the branch of uterine artery.

Acharya Sushruta said that marmas are the junction point of mamsa, sira, snayu, asthi and sandhi. Similarly all of these structures are included in Vitapa Marma also. To understand this, we can see these co-relations.

S.no.	Ayurvedic view	Modern correlation in males	Modern correlation in Females
1.	Mamsa	External oblique aponeurosis and internal oblique muscle,	External oblique aponeurosis and internal oblique muscle
2.	Sira	Ilioinguinal nerve	Ilioinguinal nerve
3.	Snayu	Inguinal ligament, spermatic cord	Inguinal ligament, Round ligament of uterus
4.	Asthi	Pecten pubis of hip bone	Pecten pubis of hip bone
5.	Sandhi	Pubic symphysis is found near to Vitapa marma	Pubic symphysis is found near to Vitapa marma

DISCUSSION

Acharya Sushrut mentioned location of Vitapa marma in between Vankshan and Vrishan. And Acharya Vagbhatta also has written its location in between vankshana and mushka. In contemporary Science we can consider this area as inguinal canal and its contents. Main content of inguinal canal in males is Spermatic cord and Round ligament in females. Sushruta has explained Alpashukrta and Shandyata as Viddha Lakshans of Vitapa marma.

In males according to the results of trauma on spermatic cord(sterility, oligospermia), our perception about Vitapa Marma is accurate as cited by ancient sages i.e. Vitapa marma is inguinal canal. It contains all the five structures which clearly establish its position as a Marma point. Anatomically, the ductus deferens is the content of spermatic cord which is responsible for transportation of the spermatozoa. If there is any obstruction or injury in the Vitapa Marma, flow of sperm is obstructed that lead to decrease sperm count or absence of the sperm in semen during ejaculation that affect conjugation .Common injuries to the spermatic cord are.

- ✓ Surgical trauma
- ✓ Accidental trauma
- ✓ Torsion induced trauma

- ✓ Vas deference injury during herniorrhaphy
- ✓ Pressure exerted by varicocele
- ✓ Inflammatory pathogenesis of cord
- ✓ Torsion or twisting of cord

The above said pathological conditions related to the spermatic cord restricts the physiological functions of sperm, which gradually affects the sexual activities and generates sterility in males.

In females, incompetence of round ligament of uterus can result in abnormalities of uterus and fallopian tube, which directly affects fertility.

Various pathological factors on Vitapa marma are enlisted to contribute to the infertility in females. These are.

- ✓ Pelvic endometriosis
- ✓ Mal-position of uterus,
- ✓ Prolapsed uterus
- ✓ Surgical trauma
- ✓ Accidental trauma
- ✓ Torsion induced trauma

During the reproductive years, may penetrate round ligaments. Endometriosis is defined as the presence of ectopic endometrial glands and stroma outside the uterus. This may lead to severe dysmenorrhea, dyspareunia, chronic pelvic pain, and infertility.

The round ligament of the uterus is the one of the main mechanical and primary support of the uterus. The normal position of the uterus is anteversion and anteflexion. Any pathology in round ligament of uterus may affect the sperm propagation, conception, implantation leading to infertility. Direct trauma on round ligament of uterus may harm fallopian tube which hampers the connectivity of ovary to the uterus.

Vitapa Marma abhighata may results in injury to the Genito-femoral and ilio-inguinal nerve which are the contents of inguinal canal. These nerves supply to the genitalia in both males as well as females. So, any injury to these parts affects the fertility of human being.

CONCLUSION

Detailed description of Vitapa Marma and its viddha lakshana is present in samhitas. Many authors emphasize only about sterility of male while discussing about Vitapa Marma but Acharya had mentioned nowhere that Vitapa Marma is present only in males. Total 107 Marma points are given in samhitas which are in males as well as females. As the present study describes that Vedhana on Vitapa Marma affects both the gender equally. Vitality of Vitapa Marma is self explained by the anatomical structures present at this site. Structures present in inguinal canal in male and female are different. In male there is spermatic cord and in female it contains round ligament of uterus. Knowledge of this vital point is important because trauma on this site during sports, surgery, and war may cause oligospermia and infertility. Structure passing through it such as; ductus deferens, testicular artery, pampiniform venous plexus, artery to ductus deferens, ilioinguinal nerve, genital branch of genitofemoral nerve in case of male and round ligament of the uterus, genital branch of genitofemoral nerve & ilioinguinal nerve in female. Injury to these structures leads to obstructive sperm transmission in male and mal-position or prolapse of uterus in female which ultimately lead to infertility.

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