



INTERNATIONAL JOURNAL OF AYURVEDA AND PHARMACEUTICAL CHEMISTRY

(A peer reviewed journal dedicated to allied Sciences)

PUBLISHED BY

Greentree Group Publishers (GGP)
greentreegrouppublishers@gmail.com

Volume 10 Issue 2 | 2019

CONTACT DETAILS

- submittoijapc@gmail.com
- www.ijapc.com
- e issn 2350-0204
- editor@ijapc.com

INDEXED IN

Open Access Scholarly Resources, ZB MED Germany, ZB MED Search Portal for Life Sciences, ZDB, Electronic Journals Library, Directory of Research Journals Indexing, I2OR, IP Indexing Portal, Geneva Foundation for Medical Education and Research, hbx composite catalog and many more..



Concept of *VitapaMarma*- A Conceptual Review Article

Jeevan kumar Giri^{1*}, Anju Thomas², Pratikshya Majagaiyan³, Uma. B. Gopal⁴ and Swati S. Bedekar⁵

^{1,2,4}Department of Rachana Sharir, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan, Karnataka, India

³Department of Shalakya Tantra, Nepal Sanskrit University, Institute of Ayurveda, Central Ayurveda Campus, Beljhundi, Dang, Nepal

⁵Department of Rachana Sharir, J.S. Ayurveda Mahavidyalaya, Nadiad, Gujarat, India

ABSTRACT

Background of study:

The knowledge of *Marma* dates back to *Vedic* period. The references of 107 *Marma*, its classification, location, dimension, impact of injury etc are available in the literature of *Ayurveda*. They are classified on the basis of structure, region, prognosis, dimension and number.

Vitapa is *Adhoshakagata Vaikalyakara Marma of 1 Anguli Pramana*. *Sushruta* opinion *Vitapa* as *Snayu Marma* whereas *Vagbhata* mention it as *Sira Marma*. Its location, *Pramana*, structural component and *Viddha Lakshana* are mentioned in gross. The anatomical structures related to *VitapaMarma* are not mentioned with respect to its *Pramana* and *Viddha Lakshana*. There is a need to understand anatomical component of *VitapaMarma* on the basis of apparent information available from classical texts. To fulfill the above mentioned needs the conceptual analysis regarding *Vitapa Marma* is needed.

Objectives:

To analyse the structural entity of the *Vitapa Marma* on the basis of mentioned location, *Pramana* and *Viddha Lakshana*.

Materials and Methods:



Greentree Group Publishers

[Received 07/01/19](#) [Accepted 20/02/19](#) [Published 10/03/19](#)



Literature review regarding the *Vitapa Marma* (structural and applied aspect related) was done through various authorized text books, journals and published articles, and then the critical analysis was done to evaluate the possible structural entity of the *Vitapa Marma* on the basis of classical information.

Results:

The location of *Vitapa Marma* is in the inguinal region and the structural entity of superficial inguinal ring and structures passing through this opening is *Vitapa Marma*.

KEYWORDS

Inguinal canal, Inguinal ring, *Marma*, Spermatic cord, *VitapaMarma*



Greentree Group Publishers

[Received 07/01/19](#) [Accepted 20/02/19](#) [Published 10/03/19](#)



INTRODUCTION

The concept of *Marma* has been described in the text of *Ayurveda* since long time ago. The *Marma* point has been considered as important point and hence *Acharya* has explained it in a separate chapter. The importance of the *Marma* was observed in warfare where the warrior used to devitalize the specific point to destroy the enemies. *Rig Veda* was the first literature where *Marma* are explained. Warriors were advised to protect their vital parts of the body before going to warfare. In the ancient days the *Marma* points were used to destroy the enemy but in the present era these point needs to be explored for their structural entity to have good surgical practice, as well as to achieve the good result of up growing *Marma* therapy.

Acharya Sushruta has defined *Marma* is the site where there is conglomeration of *Mamsa*, *Sira*, *Snayu*, *Asthi* and *Sandhi*. Especially *Prana* dwells at these sites¹. According to *Astanga Sangraha*, any part of the body where the uneven pulsations/reflex are elicited and pressure over that part causes pain, is called a *Marma*².

There are 107 *Marma*³. *Marma* are classified in different groups on the basis of various aspects, such as; on the basis of predominant structural entities, based on

impact of injury, basis of location on body, and based on measurement. *Vitapa Marma* is a *Snayu Marma*⁴. *Vagbhata* has mentioned *Vitapa Marma* as *Sira Marma*⁵. *Vitapa Marma* is one among the 107 *Marma* and is considered as one of the *Adha-Shakhagata Marma*⁶. *Vagbhata* mentioned its location is in between *Muska* and *Vamkshana*⁷.

Sushruta mentions that its location is in between *Vamkshana* and *Vrishana*. It is considered as *Vaikalyakara Marma* on the basis of prognosis or impact of injury. While explaining the *Viddha Lakshana* of *Vitapa Marma*, *Sushruta* has mentioned *Alpa Shukrata* and *Shandya*⁸.

Vaikalyakara Marma has *Soma Guna* predominance, by the virtue of stability and cold qualities of the *Soma(Jala) Guna* it supports the *Prana*. So, injury to these *Marma* causes deformity but rarely grievous injury may cause death⁹. Proper treatment by an efficient *Vaidya* may limit the risk to deformity. As per *Sushruta* and *Vagbhata Pramana* of *Vitapa Marma* is 1 *Angula*^{10,11}.

DISCUSSION

Discussion on the basis of mentioned location of *Vitapa Marma*

Vitapa Marma is situated in between *Vrishana* and *Vamkshana*^{7,8}. *Mushka* and *Vrishana* is the scrotal sac enclosing the



male gonad i.e. testis^{12,13}. In case of female the homologous organ for the scrotum is labia majors¹⁴. As per contemporary science the surface marking and location of particular organ are on the basis of the surface land marks in the body that may be bony structure or/and muscular boundaries with respect to the skin surface. The scrotum is attached to root of penis¹⁵ which is at the level of the inferior part of pubic symphysis^{16,17}. At the root of penis a point which indicates the beginning of median raphe of the scrotum can be taken for the land mark of *Vrikshana*, in case of female this point will be the midpoint between upper parts of two labia majora near the clitoris.

Vamkshana is *Adhoshakagata Sandhi*. It is *Chala type of Ulukhala Sandhi*¹⁸. This is the hip joint in contemporary science. The landmark given for the hip joint is the mid inguinal point. At this point the pulsation of the femoral artery can be felt against head of femur¹⁹. Head of femur articulate with the acetabulum of the hip bone to form hip joint. Head of femur lies at the level of midinguinal point which gives the idea of hip joint.

The location of the *Vitapa Marma* may be midway between the mid inguinal point and lower part of pubic symphysis in the groin region. It is located one inch lateral to the symphysis pubis in the

superficial ring through which the spermatic cord passes. The involved anatomical structures are external oblique, internal oblique, rectus abdominis muscle, femoral nerve, spermatic cord in male & round ligament in female²⁰.

Discussion on the basis of mentioned Pramana of Vitapa Marma

The *Vitapa Marma* is 1 *Anguli*. One *Anguli* is approximately 2 cm²¹. The length of the inguinal canal is 4cm. The measurement of the superficial inguinal ring is 2.5cm from apex to base and 1.25 cm at base²². The length of the spermatic cord is about 7.5 cm and total length of the spermatic cord from superficial ring to the apex of testis is 3.5cm²³. Length of round ligament is 10 to 12cm long²⁴. The *Anguli Pramana* of *Vitapa Marma* and dimension of superficial inguinal ring is approximately equal to each other so, structural entity of superficial inguinal ring and the structures emerging out thorough it can be considered as *Vitapa Marma*. *Mishra J.N.* mentioned the *Vitapa Marma* as the structure emerging out thorough superficial inguinal ring i.e. ilioinguinal and genitofemoral nerve with spermatic cord and round ligament in case of female²⁵.

Discussion on the basis of structural entity of Vitapa Marma

Sushruta has mentioned the *Vitapa Marma* as *snayu*⁴. *Snayu* are the binding structures.



Pratanavati Snayu is present in the *Shaka* and *Sarva Sandhi*. The boat built with wooden planks placed side by side, when fastened tightly by ropes become capable of carrying weight in water, steered by a sailor, similarly the various structure of body are held together by *Snayu*²⁶.

Vagbhata has mentioned *Vitapa Marma* as the *Sira Marma*⁵. The structure that allows the *Dravyas* to flow through it is known as *Sira*²⁷.

The inguinal canal contains spermatic cord in male and round ligament in female and ilioinguinal nerve in both^{28,29}. The covering of the spermatic cord from outside to inside are; outer external spermatic fascia which is formed as elongation of the external oblique abdominis aponeurosis which also continue in covering testis, middle layer of cremasteric fascia formed by the aponeurosis of the internal oblique and transverse abdominis muscles, it also continues to enclose the testis. Inner layer of internal spermatic fascia formed by the extension of the fascia transversalis and it also extend up to scrotum. These three fascia coat are continuous with the corresponding layer of scrotum²³. The contents of the spermatic cord are ductus deferens and artery to ductus deferens, testicular artery, cremasteric artery, pampiniform plexus of veins, lymphatics,

genital branch of genitofemoral nerve, and remnants of processus vaginalis^{23,29}.

Due to presence of the binding structure in the spermatic cord that forms the three fascial coat (external spermatic, cremasteric and internal spermatic fascia) along with presence of the ilioinguinal nerve and genital branch of genitofemoral nerve in male and round ligament in case of female, *Sushruta* opinion it as the *Snayu Marma*. Here, neuro-connective tissues are given importance regarding *Vitapa Marma*.

Due to presence of the channels carrying blood –arteries of ductus deferens, testicular artery, cremasteric artery and pampiniform plexus of vein, channels carrying male gamete –ductus deferens, channels carrying lymph –lymphatics. *Vagbhata* opines it as *Sira Marma*. Here, vascular component are given importance regarding *Vitapa Marma*.

Ghanekar B.G. interpreted *Vitapa* as inguinal canal since it is constituted by *Snayu* (aponeurosis). The content of this canal is spermatic cord³⁰. *Mishra JN.* mentioned *Vitapa Marma* as a testicular circulatory branches and spermatic cord and spermatic cord lies within inguinal canal²⁵. *Thatte DG, Singh Mahendra & Lele Avinash* mentioned *Vitapa Marma* as inguinal canal^{31,32,33}. *Srinivas Hejmadi* mentions the *Vitapa Marma* as the channel for reproductive tissue³⁴. *Murthy KR*



Srikanta mentions that *Vitapa* is inguinal canal and it consists of spermatic cord, testis and epididymis inside the scrotum and also mentions structure like Prostate gland, femoral and obturator nerves³⁵.

Discussion on the basis of *Viddha Lakshana* of *Vitapa Marma*.

Acharya Sushruta and *Vagbhata* mentioned it as *Vaikalyakara Marma* and *Viddha Lakshana* of *Vitapa Marma* lead to *Alpa Shukrata* and *Shandya*^{8,36}. The ductus deferens in the spermatic cord is responsible for transporting the sperm¹⁷. If it is obstructed or injured the sperm flow is obstructed that lead to decrease sperm count or absence of the sperm in semen during ejaculation that affect reproduction³⁷. The testicular artery and artery for ductus deferens and other arteries and vein are responsible for maintaining the tissue perfusion with nutrition and oxygen. The impact of injury in these particular vessels result in the ischemic condition of the testis, ductus deferens, even the structures of spermatic cord etc. followed by infarction and gangrene formation which ultimately lead to infertility.

The round ligament of the uterus is the one of the main mechanical and primary support of the uterus³⁸. The normal position of the uterus is anteversion and anteflexion. Long axis of vagina and long axis of the cervix of uterus forms 90 degree called

anteversion. Anteflexion orientation of uterus where the long axis of the body of uterus makes angle 125 degree with the axis of the cervical canal i.e. forward bending of the uterus on itself³⁹. The ligament pulls the fundus forwards and maintains the anteversion and anteflexion of the uterus^{38,40}. The impact of injury to the round ligament may lead to malposition of uterus, prolapse of the uterus, which ultimately affects the sperm propagation, conception, implantation leading to infertility. *Mishra J.N.* mentioned that the injury to *Vitapa Marma* region may produce obstructive pathology in vas deferens or vascular damage that may cause indirect effect in entire reproduction scenario that the ultimate result is the sterility/infertility²⁵.

CONCLUSION

On the basis of conceptual study, location of *Vitapa Marma* was found to lie on the midway between the mid inguinal point and the lower part of pubic symphysis. The *Ardhangula Pramana* of *Vitapa Marma* can be taken as the measurement of the superficial inguinal ring i.e. 2.5 cm, which is approximately equal to the *Anguli Pramana* of *Vitapa Marma*. *Acharyas's* concept of *Alpa Shukrata* and *Shandya* is due to destruction of the structural entity of the superficial ring and the 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. Structural entity of *Vitapa Marma* should be protected during surgical practice and *Marma* therapy without altering the normal physiology.

ACKNOWLEDGEMENTS:

We are sincerely thankful to Dr. Prasanna N. Rao (Professor and Principal of Sri Dharmasthala Manjunatheshwora College of Ayurveda and Hospital, Hassan), Dr. Girish KJ. (Professor, Department of Kayachikitsa), Dr. Harini A. (Associate Professor, Department of Dravya Guna) for their valuable guidance and supports.

Conflicts of Interests: None



REFERENCES

1. Acharya Y.T. Sushruta Samhita with Nibhandhasangraha commentary of Dalhanacharya. Reprint ed. Varanasi (India): Chaukambha Sankrit Sansthan; 2010.p.371.
2. Sharma SP. Astanga Sangraha with Sasilekha Sanskrit commentary of Indu.2nd ed.Varanasi (India): Chaukambha Orientalia; 2008.p.323.
3. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.183.
4. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.185.
5. Murthy KRS. Astanga Hridayam Sutrasthanam and Sharirasthanam Test and English Translation. 2nd ed. Vol. 1. Varanasi: Chowkhamba Krishnadas Academy Publication; 1994.p.428.
6. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.184.
7. Murthy KRS. Astanga Hridayam Sutrasthanam and Sharirasthanam Test and English Translation. 2nd ed. Vol. 1. Varanasi: Chowkhamba Krishnadas Academy Publication; 1994.p.422-23.
8. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.190.
9. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.186.
10. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2014.p.200.
11. Vagbhata. Astangahridayam with the commentaries sarvangasundara of Arunnadatta and Aurvedarasayan of Hemadri Sharirasthanam; 9th ed. Varanasi: chaukhambha orientalia; Reprint 2005.p.415.
12. Chaurasia BD. B D Chaurasia's Human Anatomy Regional and Applied.



4th ed. Garg DK, editor. Vol. 2. Delhi: Satish Kumar Jain for CBS Publishers and Distributors; 2004.p.234.

13. Williams Sir M. Monier. A Sanskrit-English Dictionary. 1st edition, New Delhi: Bharatya Granth Niketan, reprinted in 2007.p.1011-12.

14. Arushi & Indu Khurana, BD Chaurasia's Dream Human Embryology, 2nd edition. Krishna Garg, editor. Delhi, CBS Publishers & Distributors Pvt Ltd; 2012.p.199-200.

15. Tortora Gerard J. and Derrickson Bryan, Principles Anatomy and Physiology, 11th ed. USA; published by John Wiley and sons; p.910.

16. Chaurasia BD. B D Chaurasia's Human Anatomy Regional and Applied. 4th ed. Garg DK, editor. Vol. 2. Delhi: Satish Kumar Jain for CBS Publishers and Distributors; 2004.p.231.

17. Gray H. Gray's Anatomy -The Anatomical Basis of Clinical Practice. 39th ed. Standring S, editor. Spain: Elsevier Churchill Livingstone; 2006.p.1856.

18. K.R. Srikantha Murthy, Illustrated Sushruta Samhita-Text, English translation, Notes, Appendices and Index, Vol: 1, Reprint ed:2010, Varanasi, Chaukhamba Orientalia. p.88-89.

19. Chaurasia B.D, B D Chaurasia's Human Anatomy -Regional and Applied Dissection and clinical, Vol: 2,5th ed;

Reprint ed;2009, New Delhi, CBS Publisher and Distributors Pvt. Ltd. p.61.

20. Dr. Srinivas Hejmadi Acharya. Science of Marma in Ayurvedic diagnosis and treatment. 1st ed. Manglore: Agnivesh pharmaceuticals Ltd. 1998. Chapter 2. p.50.

21. Vishwanath K. Concept of Pramana Shareera with special reference to Determine stature from Prabahu (Brachium), Dissertation, Bangalore; Rajiv Gandhi University of Health Science; 2006.

22. Datta K. A. Essential of Human Anatomy (Abdomen and Thorax). 4th ed. Vol. 3. Kolkata: Current Book International; p.126-127.

23. Datta K. A. Essential of Human Anatomy (Abdomen and Thorax). 4th ed. Vol. 3. Kolkata: Current Book International; p.126-27 & 346.

24. Gray H. Gray's Anatomy -The Anatomical Basis of Clinical Practice. 39th ed. Standring S, editor. Spain: Elsevier Churchill Livingstone; 2006.p.1874.

25. Mishra J.N. & Chouhan P.K. Marma and Its Management. Golghar Varanasi: Chaukhamba Orientalia; p.114-115.

26. K.R. Srikantha Murthy, Illustrated Sushruta Samhita-Text, English translation, Notes, Appendices and Index, Vol: 1, Reprint ed:2010, Varanasi, Chaukhamba Orientalia, p.93.

27. K.R. Srikantha Murthy, Illustrated Sushruta Samhita-Text, English translation,



Notes, Appendices and Index, Vol: 1, Reprint ed:2010, Varanasi, Chaukhamba Orientalia, p.123-129.

28. Tortora G.J. & Grabowski S.R. Principles of Anatomy and Physiology. 8th edition. Roesch B, editor. New York: Harper Collins College Publishers; 1996.p.917.

29. Chaurasia BD. B D Chaurasia's Human Anatomy Regional and Applied. 4th ed. Garg DK, editor. Vol. 2. Delhi: Satish Kumar Jain for CBS Publishers and Distributors; 2004.p.224-25.

30. Ghanekar BG. Sushruta Samhita Shareerasthanam Sanskrit Text with Ayurvedarahasyadipika Hindi Commentary. New Delhi (India): Meharchand Lachmandas Publication; Reprint 2013.p.192.

31. Thatte DG. Sharira Rachana Vigyan. 1st ed. Varanasi: Chaukhamba Sanskrit series office Publication; 2005.p.604.

32. Lele Avinash. Secrets of Marma –A comprehensive test book of Ayurvedic vital points. Delhi: Chaukhamba Sanskrit Pratishtan; reprinted, 2002.p.

33. Singh Mahendra, Rachana Sharira Vijnana –Volume II, Chapter 7. Varanasi; Chaukhamba orientalia. Reprint ed. 2014. p.268.

34. Dr. Srinivas Hejmadi Acharya. Science of Marma in Ayurvedic diagnosis and

treatment. 1st ed. Manglore: Agnivesh pharmaceuticals Ltd. 1998. Chapter 2, p.50.

35. Murthy KR Srikanta Sushruta Samhita Nidanasthana & Sarirasthana Test, English translation. Vol. 1. Varanasi: Chaukhamba orientalia publication; Reprint 2010.p.206.

36. Murthy KRS. Astanga Hridayam Sutrasthana and Sharirasthana Test and English Translation. 2nd ed. Vol. 1. Varanasi: Chowkhamba Krishnadas Academy Publication; 1994.p.430-31,423.

37. Bardale Rajesh, Principles of Forensic Medicine & Toxicology. 2nd ed. New Delhi; Jaypee brothers Medical Publishers (P) Ltd; 2017.p.354.

38. Chaurasia BD. B D Chaurasia's Human Anatomy Regional and Applied. 4th ed. Garg DK, editor. Vol. 2. Delhi: Satish Kumar Jain for CBS Publishers and Distributors; 2004.p.391-394.

39. Datta K. A. Essential of Human Anatomy (Abdomen and Thorax). 4th ed. Vol. 333. Kolkata: Current Book International; p.361.

40. Datta K. A. Essential of Human Anatomy (Abdomen and Thorax). 4th ed. Vol. 333. Kolkata: Current Book International; p.368.