



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

AN INSIGHT INTO *SHUKRA DHATU* AND *SHUKRAVAHA SROTOMOOLA*

Pooja Halgekar¹, K N Rajashekhar², Arjun N³

P.G.Scholar¹, Professor and HOD², Assisntent Professor³

Department of Kriya Shareera, Alva's Ayurveda Medical College and Hospital Vidyagiri, Moodbidri.

ABSTRACT

Ayurveda has described three basic physiological constituents of human body, viz., *Dosha*, *Dhatu* and *Mala*. Human physique is made up of seven *Dhatu*s. *Shukra* is the 7th *Dhatu* among the *Sapta Dhatu*s and it possess the qualities of all the succeeding *Dhatu*s. *Dhatu* which exists in the body in its purest form is called *Shukra Dhatu*. The channel which carries *Shukra* is called *Shukravaha Srotas*. And its *Moola sthaana* is described as "*Vrushana*" and "*Shepha*" by *Acharya Charaka* and as "*Stanya*" and "*Vrushana*" by *Acharya Sushruta*. When *Shukra Dhatu* vitiated then it shows *Shukradhatu Dusti Laxanas* in the form of *Vridhhi* or *Kshaya*. This vitiation may primarily results in infertility and along with physical as well as psychological disorders. Thus it plays a vital role in reproduction as well as to maintain physical and mental health. In this article it is intended to make a correlation of *Shukra Dhatu* and *Shukravaha Srotas* with modern prospective to have a clearer view about the *Shukra Dhatu*.

KEYWORDS: *Shukra Dhatu*, *Shukravaha Srotas*, *Moolasthanas*.

INTRODUCTION:

According to *Ayurveda*, complete physical, mental, and spiritual well being is achieved when the *Dosha*, *Dhatu*, *Agni* and *Mala* as well as all physiological processes are in a state of homeostasis¹. *Dhatu* means body constituents which build the basic structure and carry various physiological functions. The word *Shukra* is derived from root *Shuch* i.e pure. *Dhatu* which exists in the body in its purest form is called *Shukra Dhatu*. It is composed of *Vayu*, *Jala*, *Agni* and *Pruthvi Mahabhuta*². *Shukra Dhatu* has *Ashrayashrayi*

Sambandha with *Kapha Dosha*, hence *Shukra Dhatu* is *Saumya dhatu*. *Preenana*, *Jeevana* etc..are the *Karmas* mentioned for each particular *Dhatu* among that *Garbha Utpadana* is the main function of *Shukra Dhatu*³. *Shukra* is *Sarva Deha Ashrita*. It is described that *Shukra* is located in entire body but not visible after dissection of the body. *Acharya Sharangadhara* has mentioned *Ojas* as the *Upadhatu* of the *Shukra*⁴. A fragrance is not manifested in a flower bud, but the same is found after it blossoms, similarly to the *Shukra*. This means, in childhood, *Shukra* is present in the body in *Avyakta Roopa*, out as young stage is achieved, functions of *Shukra* appears in the body⁵. The *Shukra* comes out through the urinary passage of male, from the distance of two *Angula* inferior to the orifice of urinary bladder on the right side⁶. *Shukradhara kala* is present in every part of the body⁷. *Vaktra Snigdhatta* and *Yuavana Pidaka* are *Mala* of *Shukra* according to *Acharya Sharngdhara*. According to A.H- *Oja* is *mala* of *Shukra Dhatu*⁸. *Acharya Charaka* classified *Shukra* under *Pitruja Bhava*⁹ and *Acharya Vagbhata* has considered *Shukra* as *Ashrayasthan* of *Kapha Dosha*.¹⁰

MATERIALS AND METHODS

Ayurveda texts referred in this study are *Charaka Samhita*, *Sushruta Samhita*, *Asthanga Hridaya*, *Sharangadhara Samhita* with commentaries, modern medical books and research articles.

DISCUSSION

UTPATTI OF SHUKRA

Majja Dhatvangi which is present in the *Majjavaha Srotas*, which acts on the *Majjaposhaka Amsha* in *Ahara Rasa* and helps to form *Sthayi Shukra Dhatu* Fatty portion of *Majja* forms *Shukra*. This *Shukra* comes out of bones through the pores created by *Vayu* and *Akasha Mahabhutas*. As if the water oozing out of new mud pot, *Shukra* also oozes out of these pores and then circulates all over the body through *Shukravaha Srotamsi*¹¹. *Majja* stands for even brain substance. *Mastakamajja* is the term given to indicate brain by *Dalhana*, the commentator of *Suhruta Samhita*¹². Hypothalamus secretes GnRH and Hypothalamohypophysial portal system carries this to the anterior pituitary. Anterior pituitary, in response to GnRH, secretes FSH and LH into the blood stream. These hormones then circulate all over the body and stimulate ovaries and testicles to secrete their own hormones¹³.

SHUDDHA SHUKRA DHATU LAKSHANA

Acharya Charaka and *Susruta* described the physical characteristics of *Shuddha Shukra* they are *Sphatikabha*, *Shukla*, *Drava*, *Snigdha*, *Picchila*, *Madhura*, *Avidahi*, *Bahu*, *Ghana*, *Bahal*, *Guru* and *Phalavat*^{14,15,16}. Correlation of *Shuddha Dhatu Lakshana* is given below¹⁷.

***Sphatikabha*(crystalline)** –The seminal vesicle and mucous glands gives the semen a mucoid consistency.

***Shukla*(white in colour)**- The prostatic fluid gives the semen a milky appearance.

Drava(liquid), Snigdha(unctuous), Picchila(viscid)-Semen is composed of the fluid and sperm from the vas deference, fluid from seminal vesicle, fluid from prostate gland and from bulbourethral glands.

Madhura(sweet)- Each seminal vesicle secretes a mucoid entity containing a fructose, citric acid and other nutrient substances. The normal fructose content of semen is 2-7mg/ml.

Avidahi(not producing burning sensation)- Semen has a slight alkaline , PH OF 7.2 to 7.7, due to higher PH and larger volume of fluid from the seminal vesicle.

Bahu(abundant in quantity)- no. of sperms 35 to 200million/ml.

Ghana(dense), Bahal(thick), Guru(heavy)- Each spermatozoon is composed of head and a tail.

Phalavat(invariably helps in procreation)- Due to testosterone, a main character may be property to viability, motility, no. of sperms, and normal morphology of semen.

FUNCTIONS OF SHUKRA DHATU

The basic function of Shukra are it provides *Dhairya, Chyavana, Priti, Dehabala, Harsha and Beejartha*¹⁸.

Consideration of Shukra as androgen

Chyavana – All these fuctions are indicating consideration of *Shukra* as androgen. Especially testosterone, which develops during puberty ie the masculine Characters etc and is responsible for the initiation of sexual act.

Preeti – Reffered for both the sex . It is an attraction towards opposite sex which may be physical or mental .The cause for this is development of primary or secondary sexual characters in both the sex. All these depends on fuctions of androgens.

Dehabala – Better strength to a person. This strengthening is possible in male by testosterone as it helps in anabolism of protein and similar of this is done in female by oestrogen.

So from the above reference it can be understand that *Shukra* not only having role in fertilization but it helps in development of physical as well as mental health of a person. So many of the psychological factors may also can interfere in proper *Shukra* formation and leads to infertility.

Consideration of Shukra as Semen

According to *Acharya Charaka*, the factor which is implanted in the *Garbhashaya* for the formation of *Garbha* can be considered as *Shukra*.

Which comes out due to exhilaration during coitus and enters into the vagina is *Beeja/Shukra*.

CONCEPT OF SHONITA AND ARTAVA

The Human body is made up of seven *Dhatu*s irrespective of gender. *Chakrapani* while comments on *Sushruta sutrasthana* has explained that there is *Shukra* in *Stree* which is not useful for conception or procreation. On the other hand, women conceive because of *Artava*. *Acharya Vagbhata* has clarified that even though woman secrete *Shukra* during coitus, it doesn't participate in fertilization¹⁹. *Stree Shukra* in women can be correlated with Secretions of Bartholin, Cervical and Endometrial glands. Thus, it is believed that women's *Shukras* are related to sexual activity rather than conception. *Artava* is menstrual blood and after fertilization, portion of *Artava* moving in upward direction is Estrogen, Progesterone, Oxytocin and Human chorionic gonadotropic hormone. *Stree Shonita* is ovum which is essential for conception.

MOOLASTHANA OF SHUKRAVAHA SROTAS

According to *Acharya Charaka Vrushana* and *Shepha* are *Moolasthanas* of *Shukravaha Srotas*²⁰. *Sushruta* opines *Vrushana*, and *stanya*²¹ mean while *Asthanga Sangraha* states *Stanya*, *Mushka* and *Majja*²² as the *Moolasthana*.

Vrushana* and *Shepha* as *Moolasthana

Vrushana is considered here as testis where once the spermatozoon is formed, it is released in seminiferous tubules and the fluid for the transport of sperm is produced by sertoli cells present in seminiferous tubules.

The fluid pressure pushes sperm along the lumen of seminiferous tubules which reaches the rete testis via straight tubules and from there to coiled efferent ducts in epididymis, then vas deferens reaching to the ejaculatory duct and through urethra is ejaculated out.

Shepha is considered as penis which is the *Moola* because it helps in the *Vahana* of *Shukra* as during the ejaculation, the semen is expelled out by strong spasmodic contractions of bulbocavernous muscle which encircles the corpus spongiosum.

By the site of formation and path of ejaculation of *Shukra*, *Vrushana* and *Shepha* is considered as *Moolasthana*.

Stana* as *Moolasthana

In *Sushruta Sharira Sthana* it explained that there are 6 *Dhamanias* i.e. 2 *Urdhvaga* and 4 *Adhoga*. The two *Urdhvaga* which carry *Stanya*, where as 4 *Adhoga* which are meant for *Shukra Pradurbhava* and *Shukra Visarga*, where in females they help in menstruation.

Prolactin inhibits pulsatile GnRH secretion and consequently inhibits the pulsatile release of FSH, LH, testosterone. This results in marked effects on spermatogenesis ranging from alteration in sperm quality to

complete spermatogenic arrest. As a result the patient may present with secondary hypogonadism or male infertility²³.

Majja dhatu as Moolasthan

Majja Dhatu is considered *Moolasthan* because in *Dhatu Parinama* it is stated that from *Snehamsha* of *Majja* the *Shukra Dhatu Utpatti* take place.

There is a sequential process of nourishment of tissue called as *Uttarotardhatuposhana Nyaya*. *Acharya Chakrapani* has postulated *Kedari Kulya Nayaya*, where *Rakta* gets nourished first by its homologous nutrient fraction present in the *Rasa Dhatu* in succeeding manner. In the same way, *Shukra dhatu* is replenished and nourished after *Majja dhatu*.

Acharya Dalhana has postulated, precursor of succeeding *Dhatu* is formed by the previous *Dhatu*. In the formation of *Majja Dhatu*, *Sukshma Shukra* is formed and *Shukraagni* acts on it which does the *Poshana* of *Shukra Dhatu*.

It has been also reported that researches raises the future possibility of developing immature sperm cells from hematopoietic stem cells of bone marrow. This concept has great implication of the *Shukrapushti karma* of *Majja Dhatu*. Hence the concept of *Majja Dhatu* in *Ayurvedic* sciences signifies its relevance with the contemporary modern physiology of bone marrow²⁴.

CONCLUSION

Considering the physiology and pathological aspect of *Vrushana*, *Shepha*, *Stana* and *Majja* can be considered as *Moolasthan* of *Shukravaha srotas*. The term *Shukra* represents the androgens, semen and sperm itself according to the suitability of the contexts. Study of *Shukra Dhatu* is necessary for increasing healthy creation and production capacity of *Shukra* as well as enhance general health.

Reference

1. Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibhandhasanghrah Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sutra Sthana; Chapter 15, Verse 41. Varanasi: Chaukambha Krishnadas Academy ,2009; p.75
2. Vaidya Yadavji Trikamji Acharya, Charaka Samhita by Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta, Sharira Sthana; Chapter 2,Verse 4.Varanasi: Chaukambha Krishnadas Academy, 2023; p.302
3. Dr. Sreekumar, Ashtanga Hridaya by Vagbhata with commentaries of Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri, Sutra Sthana, Chapter 11, Verse 4. Harisree hospital, 2009; p.183

4. Prof K .R. Srikantha Murthy , Sharanghadhara Samhita by Sharanghadhara , Poorva Sthana; Chapter 5, Verse 17. Varanasi: Chaukambha Krishnadas Academy, 2017;p.22
5. Vaidya Yadavji Trikamji Acharya, Charaka Samhita by Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta, Chikitsa Sthana; Chapter2,Verse 39.Varanasi: Chaukambha Krishnadas Academy, 2015; p.397
6. Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibhandhasanghrraha Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sharira Sthana; Chapter 4, Verse 21, 22. Varanasi: Chaukambha Krishnadas Academy ,2009; p.357
- 7.Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibhandhasanghrraha Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sharira Sthana; Chapter 4, Verse 20. Varanasi: Chaukambha Krishnadas Academy ,2009; p.357
8. Gupta Atrideva -Ashtang Hridaya Samhita with Vidyotini Hindi commentary, Sharira sthana, chapter no. 3, verse no. 63, Re-print edition, Published by Chaukhamba Prakashan Varanasi; 2009. p.258
9. Charaka Samhita of Agnivesha, by Vaidya H.C. Kushwaha Edited with Ayurveda Deepika, Hindi Commentary, 1stvolume, Chaukhamba Orientalia, Varanasi, 2016 Shareer sthana 3rdchapter, shloka no.7, pp 772
10. Astanga Hrudaya Sutrasthana, by Dr T. Sreekumar English translation & Commentary 1stvolume chapter No 11 sloka no 26 pp 297
11. Vaidya Yadavji Trikamji Acharya, Charaka Samhita by Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta, Chikitsa Sthana; Chapter 15, Verse 32,33.Varanasi: Chaukambha Krishnadas Academy, 2015; p.515
12. Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibhandhasanghrraha Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sharira Sthana; Chapter 10, Verse 42. Varanasi: Chaukambha Krishnadas Academy ,2009; p.391
13. K. Sembulingam, Essentials of Medical physiology, 7th edition. New Delhi;p.390,391.
14. Vaidya Yadavji Trikamji Acharya, Charaka Samhita by Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta, Chikitsa Sthana; Chapter 30, Verse 145.Varanasi: Chaukambha Krishnadas Academy, 2015; p.640
15. Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibhandhasanghrraha Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sharira Sthana; Chapter 2, Verse 11. Varanasi: Chaukambha Krishnadas Academy ,2009; p.345

16 .Vaidya Yadavji Trikamji Acharya, Charaka Samhita by Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta, Chikitsa Sthana; Chapter 2, Verse 50.Varanasi: Chaukambha Krishnadas Academy, 2023; p.397

17. Hall JE, Guyton AC. Reproductive Physiology. In: Vaz M, editors. Textbook of medical physiology. 2nd ed. New Delhi (India): Elseveir; 2018. p. 651-696.

18. Dalhan. Doshadhatumalakshayavradhivigyaniya adhyaya. In: Trikam Y, editors. Nibandha Sangraha on Sushrut Samhita. Revised edition. Varanasi (India): Chaukhamba Sanskrit Sansthan; 2009. p. 67- 73

19. Gupta Atrideva Ashtang Sangraha Samhita with Hindi commentary, Sharira Sthana, chapter no.1, verse no.72, reprint edition, Published by Krishnadas Academy, Varanasi; 1993. p. 271

20.Agnivesha, Charaka Samhita with Ayurveda Dipika Commentary, Ed. Acharya Y.T, Choukambha Sanskrit Sansthan, Varanasi,2013 (Reprint),Vimana sthana; Chapter 5, Verse 8;p.251.

21. Vaidya Yadavji Trikamji Acharya, Sushruta Samhita by Sushruta with Nibandhasanghraha Commentary of Dalhanacharya and Nyayachandrika Panchika of Gayadasa, Sharira Sthana; Chapter 9, Verse 12. Varanasi: Chaukambha Krishnadas Academy ,2012; p.386

22. *Astangasamgraha of Vrddha Vagbhata with Sasileka Sanskrita* Commentary by Indu, Ed. Dr. Shivprasad Sharma, Chowkhamba Sanskrit series office;Ed 6, 2022, *Sarirasthana*; Chapter 6, Verse 25.p. 314

23 . <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5922222/>

24 . <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4651278/>