

PHYSIOLOGICAL ASPECT OF SHUKRA DHATU: A REVIEW

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ABSTRACT

According to Ayurveda, Shukra is the terminal tissue of the body, considered as the Sara of all other Dhatus, pervading entire body in both sexes, responsible for systemic and functions associated with sexual behaviour. Some form of which comes out of the body at the time of sexual act in visible form (*Roopadravya*) in male as semen. The chief function credited to *Shukra Dhatu (Sarva Sharir Vyapi)* as well as the semen (*Roopadravya*) is *Garbhopadan*.

Keywords: Shukra Dhatu, Roopdravya, Semen, Reproduction

INTRODUCTION

Reproduction is one of the basic characteristics of living being, which ensures continued existence of the species on earth. In male reproduction is the prime function of 'Shukra' while in female 'Artava' is responsible for fertilization. Shukra is present in entire body and is considered as the Sara of all other Dhatu. So it is advised practicing healthy sexual life, consuming healthy food and leading a healthy lifestyle help to protect Shukra.

Aim & Objectives: To review literature regarding *Shukra Dhatu* as described in Ayurveda classics and to explore it in view of modern endocrinological aspect.

Material & Method: All available *Ayurveda* classical texts, relevant literature from modern physiology, other various related information from authentic publications and internet.

All relevant references will be compiled, analysed, discussed and reviewed as the method to get a thorough and in depth understanding of physiological aspect of *Shukra Dhatu*.

Review of Literature: Term *Dhatu* is used in various references in *Ayurveda* classics but the physiological aspect of this word represents the primary tissues, responsible for *Dharana* and *Poshana* of the body¹. *Sushruta* named them *Dhatu* because of their *Sharir Dharana* function. These are seven viz. *Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra*, since may vitiated by *Doshas* hence also considered as *Dushya*². *Dhatu* originates from its previous *Dhatu*, when getting matured, is metabolized and replaced by new *Dhatu Dravyas* continuously thus fulfilling the *Utpatti (origin)* and *Kshatipurti (replacement)* of *Dhatu itself*. This process of transformation and replacement is called as *Dhatvagni Vyapar (tissue metabolism)*³.

Shukra is the terminal tissue element of the body and is considered as the *Sara* (extract) of all other *Dhatus*⁴. The word 'Shukra' is derived from the *Dhatu "Shuch shoch"* (शुच्, शौच) (meaning purity) or "Shuch - Klede" (शुच, क्लेदे) means *Kledarthaka Shuchi Dhatu*, and by adding *Ounadhika Ran Pratyaya* and *Katwadesh* in place of *R*, *Shukra* word is proved⁵.

Charaka has described *Shukra* as the substance which is discharged by male in the vagina of female after menstrual bleeding for the creation of *Garbha* and composed of for Mahabhuta: *Vayu*, *Agni*, *Apa* and *Prathavi* except *Akash*. Each of four *Bhutas* (*Vayu*, *Agni*, *Prithvi* and *Apa*) individually shares one fourth

of the attributes of *Shukra*⁶. *Sushruta* mentioned *Bhautic* origin of *Shukra* from *Soma* or *Jalamahabhuta* predominantly.⁷ So, the substances having *Saumya* nature (*Kapha Vargiya Dravya*) like *Madhura*, *Snigdha* favours *Shukra Dhatu Nirmana* thus promote fertility in male.

Table 1: Relationship between Mahabhuta and attributes of *Shukra* -

S. No.	Mahabhuta	Attributes of Shukra
1.	<i>Tejas</i>	<i>Shukla Varna</i> (like allum)
2.	<i>Jaliya</i>	<i>Madhur Rasa</i> , <i>Snigdhata</i> , <i>Pichhilata</i> , <i>Dravata</i>
3.	<i>Parthiva</i>	<i>Madhugandhi</i> , <i>Guru</i>
4.	<i>Vayvya</i>	<i>Snigdha Sparsha</i>

Describing the characteristic features of *Shukra* (*Roopadravya*) *Charaka* mentioned *Shukra* having properties like unctuous, viscous, heavy, slimy, copious, sweet in taste, none burning, white like rock crystal, devoid of unpleasant smell should be considered as pure and undoubtedly fruitful⁸ while *Sushruta* mentioned *Shukra*, which is glossy and transparent like crystal, fluid in nature, sweet in taste and exhibits the smell of honey or oil or may be like honey in appearance (according to some other authors) should be considered as pure⁹. The normal quantity of *Shukra* in human body is said to be half *Anjali*¹⁰, but according to *Bhela* it is one *Anjali*¹¹. Being one of the seven *Dhatu* it should be present in entire body, but it is found in significant amount in some organs (storage sites or working places) specially. These organs may be considered as the locations of *ShukraDhatu*. Besides this the *ShuukravahaSrotasMoola* as well as all body organs directed in *Shukrasara* individual may also be considered as the location of *Shukra Dhatu* in the body. In *Sushruta Nidana*, it has described that as fat (*Sarpi*) is in the milk, sugar is in the expressed juice of sugarcane, Ghee in curd and oil in sesames (Seeds) *Shukrais* pervaded all over the sentient body¹². *Charaka* has also stated similar concept in *Chikitsa Sthana*¹³, in *Ashtang Samgriha Sharir Sthana*, it has described that seventh (*Shukradhara*) *Kala*, which is situated at a distance of two *Angulas* from right side of the *Mutramarga* below *Bastidwar* and is pervaded in all body and it assimilates *Shukra* in it¹⁴. But on

cutting or dissecting the body parts it is not visible, on the other hand when a person is sexually excited this squeezes out from whole body in the form of *Roopadravya* (*visible form*) and get accumulated in *Shukrashaya* and ejaculated by *Shishna* (penis) being stimulated by various stimuli¹⁵. *Sushruta inSharir Sthana* described that in female, *Artava* is responsible for fertilization not the *Stri Shukra*. He also stated that when two females involve in indulgence, the fetus formed is *Anasthigarbha*¹⁶. This means, without bone or having undeveloped bones as *AsthiBhava* is produced in *Garbha* because of *PitrajBhava*¹⁷. The main function of *ShukraDhatu* is reproduction & it is said that *Stri Shukra* is not capable of reproduction but *Artava* is responsible for it in female¹⁸. While *Bhavamishra* described that in female *ShukraDhatu* keeps vagina moist during the act of coitus¹⁹. In *Charaka Samhita Chikitsa Sthana*, it has been described that, before puberty *Shukra* remains in dormant stage and appears in visible form after puberty as a flower has its specific fragrance, which is hidden (not expressed) in its bud stage²⁰.

DISCUSSION

The meaning of word *Shukra* often is mistaken only as semen (*Roopadravya*) ejaculated during the sexual act, but basically is an subtle entity pervading entire body with the help of *Shukradharakala* as *Ghrta* (Ghee) is hidden in milk (*Sarvasharigata*) and may be termed as *Suksma Roopa* of *Shukra*²¹ representing

seventh *Dhatu* in male and female both serving as primary tissue, carries out systemic functions like *Dhairya* (courage), *Preeti*, *Deha Bala*, (strength of the body) etc, and some functions related to sexual act like *Harsha* and *Chyavan* 'present in both the sexes'²². Furthermore it may be compared with the entire endocrine orchestra of Hypothalamic-Pituitary-Gonadal (HPG) axis which regulates entire reproductive physiology, including GnRH from Hypothalamus, GTH from anterior pituitary and sex hormones. GnRH and GTH are secreted in both the sexes equally while sex hormones secreted in both sexes but in different amounts. Progesterone with oestrogen strengthen the bones, maintains blood cholesterol level, oestrogen promotes growth and development while testosterone stimulates hemopoiesis, muscular and bone growth etc²³. Furthermore there are some Synonyms of *Shukra* viz, *Paurusam* (virility inherited in a man), *Veerya* (potency to perform), *Bala* (strength), *Tejas* (which is shiny and bright and is the absolute essence of *Ahara Rasa*), which recognize it as an androgen derivative, showing masculinising properties all over in the body²⁴. The characteristics of *Shukra Sara* individual may also be considered as the effect of *Sarvasharigata* (*Sukshma*) *Shukra* like *Soumya* (gentleman) possessing *Saumyapreksinaha* (gentle look), *Ksipuranalocana* (milky eyes), *Praharsha Bahula* (joyful), *Snigdhavrittassamahata-dasanaha* (slimy, rounded, solid, compact and uniform teeth), *prasanna* – *Snigdhavarnasara* (pleasant and smooth voice and complexion), *Bhrajisnta* (stunning appearance), *Mahaspica* (large buttocks), *Stri-Priya* (loved by opposite sex), *Upbhoga Balavna* (virile), *Sukha* (endowed with pleasure), *Aiswarya* (prosperity), *Arogya* (health), *Vit-ta* (money), *Sammana* (respect), *Apatyabahula* (having numerous descendants)²⁵.

This *Sukshma* form of *Shukra* displays its presence by the ejection in its visible form (*Stoola Roopa* of *Shukra*) by sexual drives²⁶. By exhibiting similar properties and functions, it may be simply matched to the semen (the secretion of the prostate, seminal vesicles and Cowper's gland ejaculated at the climax of sexual act, serving as the suspension of spermatozoa)²⁷ eg. *Saphatikabham* (white and translucent), *Madhugandhi*

(the special odour imparted to semen), fructose present in seminal fluids gives *Madhura* (sweet) taste, *Avidahi* characteristic indicates pH of the semen (neither acidic nor strongly alkaline) meaning not causing burning sensation during ejaculation, the other physical characteristics like *Drava* (liquid), *Snigdha* (slimy), *Pichhila* (viscous) and *Sara* (flowing) postulate the normal consistency of semen owing to the various components of seminal fluid, *Bahala* and *Bahu*²⁸ specify the appropriate amount of semen and the sperm count respectively. In modern medicine also it is mentioned that for fertility semen should be in adequate volume and sperm count should be more than 20 million with sufficient activity and motility of sperms²⁹. *Retas* and *Roopadravya* are some synonyms of *Shukra* representing it as semen, As *Chakrapani* defined *Retas* as the factor accountable for reproduction. *Roopadravya* can be taken as semen as a whole along with its subtle bodies (sperms).

Likewise female also bring out *Shukra* at the time of sexual arousal consisting of mucus secretions³⁰ from paraurethral (skene's) glands (homologous to the male prostate) and greater vestibular (bartholine's) glands providing lubrication³¹ exhibiting some qualities similar to *Shukra* e.g. *Guru*, *Snigdha*, *Pichhila* and *Madhu*, *Gandhi* etc³².

It is further explained by the concept of two forms of *Shukra* – *Antah* and *Bahi* as described by *Gannath Sen*, *Antah Shukra* (*Sarvashariragata*) is secreted in both sexes and carries out all systemic as well as reproductive functions by stimulating growth of accessory reproductive organs and secondary sex characteristics in both sexes acting as seventh *Dhatu* essential for sustenance of life while *Bahi Shukra* is represented in male by semen (along with sperms), capable of reproduction and in female by secretions of cervical, Bartholin gland etc, which simply lubricate vaginal passage and facilitates coitus but has no direct role in reproduction and is the visible form of *Shukra* in female. So *Stri Shukra* may be represented by both type of *Shukra*, *Antah* and *Bahi*³³.

Furthermore, this concept also supports the presence of *Shukra Dhatu* in children, since hormones from HPG Axis secreted in incompetent amount before pu-

erty so cannot expressed their functions (systemic as well as reproductive). Thereafter at the onset of puberty its secretion increases speedily and continues throughout the life, causing growth of accessory sex organs and development of adult primary and secondary sexual characteristics³⁴.

CONCLUSION

Shukra Dhatu is one of the *Sapta Dhatus*, which exist in both sexes, serving as primary tissue, pervading in entire body in invisible form as *Sukshma Shukra* or *Antah Shukra* carries out all systemic functions and functions related to sexual behaviour along with entire reproductive physiology.

It may be identified principally with the endocrine orchestra of Hypothalamic-Pituitary-Gonadial (HPG) axis as a whole which regulates entire reproductive physiology. Since these hormones are secreted in inefficient amount before puberty so cannot expressed their functions in children. Second category of *Shukra* is *Sthula Roopa* of *Shukra* (visible form), may be considered as *Roopa Dravya* or *Bahi Shukra* significantly appears only in male after puberty especially in reproductive organs like *Vrishana* and *Medhra* etc. Serving function of *Garbhotpadana* /*Beejotpadan*. It is compared with semen carrying sperms. It is compared with the visible form of reproductive secretions in female at the time of sexual arousal. Since it doesn't contain *StriBeeja* (ovum) so is not capable of *Garbhotpadan* while *Artava* /*Shonita* (female gamete) carries out this function in female. The chief function credited to *Shukra Dhatu* (*Sarva Sharir Vyapi Sukshma Shukra*) as well as the semen (*Sthula Shukra*) is *Garbhotpadan*.

This is not correlations but is the way to understand the *Ayurveda* in the light of modern sciences.

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