

A COMPREHENSIVE REVIEW OF SHUKRA DHATU UTPATTI (FORMATION) & STRAVA (EJACULATION)

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ABSTRACT

Shukra dhatu is present throughout the body, but according to Sushruta, it is most prominent at the bladder opening. Moola-sthana (origin) of Shukravaha srotasa (system related with reproductive tissue) has been attributed to Vrishana (testis), Shepha (penis), Stana (breast), and Majja (bone marrow). Shukradhara kala is a vital structure that spans the entire body. The transformation of Ahara Rasa into Shukra Dhatu takes about a month. Shukra's origins may be traced back to Ahara Parinama, as a result of Majja Dhatu, and as a result of Soma – Jala Mahaabhuta. Shukra's Abhivyakti suggests that, although its inconspicuous presence since birth, its full expression comes only after a certain period, namely adolescence. Shukra Pramaana is Ardha Anjali (1/2 handful), whereas typical semen volume is 2 ml according to WHO standards. Dhairya (sexual potency), Chyavanam (timely ejaculation), Preeti (love for partner), Dehabalam (physical strength), Harshana (sexual desire), and Beejaratha (to fulfil the purpose of beeja, i.e. procreation) are considered to be the functions of the Shukra. When Shukra, which is prevalent throughout the body, is triggered by Harsha, Darshana, Smarana, hearing the voice, Sparshana, or performing sexual activities, Shukra travels to the testis and ejaculates it.

Spermatogenesis is a highly structured, complicated series of mitotic and meiotic differentiation processes that result in genetically differentiated male gametes for fertilisation with the female ovum. It aids in the propagation of a species and adds to genetic diversity on a larger scale. Spermatogenesis is the process of turning spermatogonial germ cells into spermatids through cell proliferation and remodelling. Several inherent and external variables influence the process. Spermatids are transformed into motile spermatozoa, which are highly specialised haploid cells, during spermiogenesis. Spermatozoa are discharged into the epididymis via the seminiferous tubules, where they undergo post-testicular maturation and storage. At the time of ejaculation, the ejaculate, or semen, is freshly generated. Ejaculation usually follows a predictable pattern.

Keywords: Shukra Dhatu, Spermatogenesis, Shukra Dhatu Utpatti, Shukra Strava

INTRODUCTION

Dhatu is 'Dhu-dharayati' which means dharana - to support and Poshana – to nourish the body. The term Dharana denotes that these said to make the structural architecture of the body. Dhatus are the body's supporting components. Well-nourished dhatus give strength to body and maintain health and immunity. Dhatu of weak quality are prone to disease. The Sapta dhatus exist, as concrete formed entities e.g. the circulating Rasa and Rakta (Plasma and blood), Mansa (muscular tissue), Medas (adipose tissue), Asthi (bone tissue), Majja (bone marrow) and Shukra (semen and other reproductive elements). These Sapta dhatus are being continuously formed with necessary materials derived from Ahara (nutrient materials). These dhatu is of two kinds Sthayee or Poshya (stable or to be nourished) and Asthayee or Poshaka (unstable or which nourishes). Sapta dhatu already existing as stable dhatus and equal number of metabolically transformed precursor nutrient, substances obtained from ahara and are meant to be utilized for nourishment, synthesis and maintenance of Sthayee dhatus respectively.

Nutrient substances undergo transformations under the influence of their own ushma and thereafter transported to the dhatus through their specific transporting channels. The seven dhatus that support the body undergo two kinds of transformation (paka) i.e. Prasad and Kitta, under the influence of its own agni prasada bhaga of ahara rasa nourished seven dhatus including Ojas. Kitta bhaga nourishes sweda, mutra, purisha, Vata, Pitta, Kapha and malas of eye, ear, nose, throat, mouth, hair follicle and external genitalias. Thus, essential Rasas and Malas nourishing the body in a balanced way and they are responsible for dhatu samya. Due to the

above-mentioned points Sushruta has mentioned that dosha, dhatu and malas are the root or pillar of the body on which the body is supported and maintained.

Dhatu means Rasa-raktadi seven dhatu but in certain condition some other substances are also present which can be considered as Dhatu. The nutrient portion of food which gives rise to Prasadakhya dhatu, which are seven dhatu, five indriya dravyas, parts of the joints and related structures. Malakhya dhatu are the product of Kitta bhaga of ahara rasa, these are Vata, pitta, kapha, sweda, karnamala, nasikamala, mukhamala, romakupamala, prajananmala, kasha, nakhas and other excretions are also considered as malas.

The seven Dhatus of the body are formed one after the other i.e. from Rasa Rakta is formed, from Rakta Mamsa is formed and so on. In the end from Majja Shukra is formed. The two words Guru and Laghu are mentioned by Acharya Charaka in connection with Dhatus. He believes that if Dhatus are numbered from Rasa to Shukra, they would continue to become Guru in character, but the reverse is true for Laghu. As a result, the Rasa and Shukra are referred to as Laghutam and Gurutam.

Dhatvagni, Vayu, and Strotasa all play a part in ensuring that dhatus are properly nourished. Vayu is in charge of transporting a specified amount of nutrition to each dhatu. Strotas is Dhatvagni's site since he is the one who processed and transformed Posaka Dhatu into Posya Dhatu. Strotasa are the transportation and transformation channels. Agni is necessary for all transformations. As a result, it is inferred that each Dhatu's Dhatvagni lives at Strotasa, which is accountable for Dhatu's Parinamana from one state to another. Shukra is a substance that is responsible for all systemic bodily processes, including metabolic functions, and that emerges out of the body during sexual activity to fulfil particular reproductive tasks. It is considered the essence of all dhatus and contains all panchaboutika components. it is Sarvadihika.

LITERARY REVIEW - The term 'Shukra' is derived grammatically as: Sucha + Raka+Kram = Shukra. The derived term "Shukra" has various meanings, including "bright," "white," and "resplendent." "*Puman punsa adhike shukre stree bhabhatyadhike striya*" is how it is stated in Manusmriti.

PRODUCTION/FORMATION OF SHUKRA

Shukra's Bhautik origin is thought to be Jalamahabhuta, as previously stated. The major fundamental element from which Kapha is derived is Jala Mahabhuta. As a result, Shukra may be traced back to Jala Mahabhuta.

From Ahara Rasa

All of the Dhatu are created in a gradual evolutionary transformation from Rasa Dhatu to Shukra. This indicates that Rasa Dhatu is made mostly from Ahara Rasa, which is absorbed via Jatharagni's activity. Rasa Dhatu, for example, is transformed into Rakta Dhatu, and so on. The preceding Dhatu's action of the associated dhatvagni serves as a precursor to the next and higher Dhatus. Majja Dhatu is used to make Shukra Dhatu. These hypotheses, which describe the mode of conversion of Ahara Rasa into Shukra, are as follows:

1. Ksira-dadhi Nyaya,
2. Khale-kapota Nyaya,
3. Kedari-kulya Nyaya
4. Eka-Kaal Dhatuposhana Nyaya

After Jatharagni and Bhutagni operate on the swallowed Chaturvidha Ahara, it transforms into Ahararasa. The action of Dhatvagni then begins. Dhatvagni's action converts the old Dhatu and divides it into two pieces. They are Prasada Bhaga and Kitta Bhaga, respectively.

Kshiradadhi Nyaya - According to this theory, preceding Dhatu undergoes entire transformation into the next Dhatu, just as milk undergoes complete transformation into curd, curd into butter, and butter into ghee. It is also known as Krama-Parinam Paksha because the development of the following Dhatu up to Shukra Dhatu takes place in stages, and since the previous Dhatu changes entirely into the next Dhatu. Prasad Bhag and Kitta Bhag are produced once the Agni is acted out.

To begin, the Jatharagni works on Ahara, forming Anna Rasa as the Prasad Bhag, Purisha and Mutra as the Kitta Bhag, and Purisha and Mutra as the Kitta Bhag. Rasa Dhatvagni prepares the Prasada and Kitta Bhag from this Anna Rasa. This Prasad Bhag has now been split into two sections: Sthula and Sukshma Prasadansh. The respective Dhatu - Rasa is nourished by Sthula Prasadansh. Sukshma Prasadansh feeds the Upadhatu and creates the following Dhatu, Rakta, with its portion resembling it. Now the appropriate Dhatvagni processes the next Dhatu nurturing portion of the preceding Dhatu and creates the Prasad and Kitta Bhaga. When the Shukra Dhatvagni processes the Shukradhatu resembling portion of Shukshma Prasadansh of Majja Dhatu, Prasada and Kitta Bhaga should be created here. Because Shukra is our body's last and purest Dhatu, only Prasad Bhaga is created, which completely changes into Shukra Dhatu, and no Kitta Bhaga is formed.

Kedarikulya Nyaya - According to this theory, Anna Rasa arrives to a Dhatu's unique Dhatu creation location and is converted into that Dhatu by the activity of the Dhatvagni. The pattern of Anna Rasa's reaching resembles that of a tributary of a canal that supplies water to the field rows. It indicates that water reaches the row closest to the tributary first. In the same way, Anna Rasa feeds Rasa Dhatu first, then Rakta, and so on. Finally, the Anna Rasa nourishes Shukra Dhatu. Shukra Dhatu, which resembles a piece of the Anna Rasa, is digested there by Shukragni, and Prasad Bhaga instead of Kitta Bhaga is generated. Without creating any Updhatu, this Prasada Bhaga now completely nourishes the Shukra Dhatu.

Khalekapota Nyaya - When the pigeons return to their homes after dining in the field, each pigeon takes a different amount of time depending on the distance between the field and their home. According to this theory, there are several ways for the Anna Rasa to reach the Dhatu creation location. So, as far as the formation site of a Dhatu is concerned, the journey will be long, and Anna Rasa will spend more time there to feed that Dhatu. Shukra Dhatvagni works on the part of the Anna Rasa resembling Shukra Dhatu that reaches the location of Shukra creation through suitable pathways, forming the Shukra Dhatu as stated in Kedari-Kulya Nyaya.

Ek-kaal Dhatu Poshana Nyaya - By the aid of Vyan Vayu, the Ahara Rasa is diffused and dispersed throughout the entire body at the same time, constantly and always, according to Charaka and Vagbhata. Because this Ahara Rasa enters all seven Dhatus' pathways at the same time, all seven Dhatus are nourished at the same time, according to Arundatta.

From Majja Dhatu

The semen is the highest stage at which food may progress. Shukra is the seventh and last Dhatu, and it is generated by a progressive evolutionary transformation as a Sara (essence) of all Dhatus. Shukra Dhatu is derived from Majja Dhatu's Prasada Bhaga by Shukra Dhatvagni's activity. In Asthi Dhatu, Vayu and Akasha Mahabhuta generate porosity. Shukra pours out of these pores like water from a fresh clay pot and spreads throughout the body. According to Dalhana Acharya's commentary on Sushruta, Mastiska or Mastulunga is Majja. Prof. V.J. Thaker believes that the brain and pituitary gland are functional representatives of Majja. In this method, the creation of Shukra and secondary hair development at a specific age may be understood. (Purushvichaya)

Time Required for Production of Shukra

According to Acharya Sushruta, the transformation of Ahara Rasa into Shukra Dhatu takes about a month. However, according to Parashara, those eight days are sufficient for Shukra Nirmana from the Ahara Rasa. Finally, Acharya Vagbhata cited all points of view from many authors, which may take up to twenty-four hours, six days, or a month. All of the aforementioned viewpoints have been linked by Acharya Chakrapani, who has raised the notion to the rank of Dhatvagni. According to Acharya Chakrapani, if Dhatvagni is at its peak, Shukra creation takes place at the pace of 'Archi' (Fire) and takes eight days. Shukra Nirmana occurs at the pace of 'Shabda' (Sound) and generates Shukra Dhatu in two to three weeks if Dhatvagni is moderate. When Dhatvagni is at a low level, the Shukra manufacturing process moves at the speed of 'Jala' (water).

MECHANISM OF SHUKRA VISARGA/STRAVA (EJACULATION):

In the Shukradhara Kala, the Shukra Dhatu produced via evolutionary transformation penetrates all over the body, and the Kala performs the following functions:

1. Abode for the all-pervading Shukra Dhatu: it contains and offers a abode for Shukra's Sarvadaihika (whole-body) activities.
2. Assists Shukra Dhatu's metamorphosis into Roopa Dravya.

The ejaculated component of Shukra, which is the only visible element of the Shukra Dhatu, is referred to as Roopa Dravya. The Roopa Dravya is generated in the Vrishana, the Mula of the Shukravaha Srotasa. With the following example, the process of its metamorphosis is discussed metamorphosically in classics - Shukra comes out of man, out of its site during copulation between man and woman, due to Chesta, Sankalpa, and Pidana, in a similar way to water flowing out of a wet towel when pressed.

Shukra is the human body's (Roopadravya) representational principle of Visvarupa (Atma). Shukra is the primary factor for achieving this Visvarupa (sarirarupa). Sarvasariragata Shukra is a hidden form of Atma, which is undetectable to human eyes and also nirguna. However, during copulation between a man and a woman, Shukra is released as a result of Chesta (physical stimulus), Sankalpa (desire), and Pidana (stimulation of erogenous area of body). Above all of them, Acharya Charaka considers Sankalpa to be the Parama (best) Vrishya. Cheshta (love play – physical stimulus) and Sankalpa (psychological stimulus) of Stri and Purusha are responsible for ejaculation, followed by Harsha (Passionate desire for enjoyment) and Tarsha (longing for women or psychic excitement) of both; Saratva (fluidity), Pichchhilata (slimness), Gaurava (heaviness), and most importantly, Anutva (atomic nature) and Pravanat (tendency to move from higher to lower concentration)

of Shukra Dhatu. Shukra Dhatu's Anutva and Mana's Anutva combine to bring out Shukra as the ejaculatory component - Roopa Dravya, which penetrates the entire body.

The tumescence of Shukravaha Sira caused by psychological and physical stimuli, i.e. Harsha, results in erection of the penis, which facilitates sexual act. Shukra is produced as a result of libidinous excitement caused by a woman's vision, memory, and touch. Vyana Vayu is in charge of the body's circulatory system, Rasavaha Sansthana, and Shukra is also present throughout the body, whereas Apana Vayu is in charge of sex orgasm and acts locally. Shukra is mostly expelled to the external through the penis through Vyana Vayu and Apana Vayu. Both operate as interdependent core and peripheral controllers of the ejaculation process in this situation. Ejaculation is regulated in part by the eight psychosomatic variables associated with Mana and Shukra. It's a psychosomatic endocrine system in complete.

CHARACTERS OF SHUKRA

Shukra has two distinct characteristics: 1. Sarvasariragata Shukra & 2. Ejaculatory or Rupadravya Functions

FEATURE OF SARVASARIRAGATA SHUKRA

Sarvasariragata Shukra is a term used to describe a person who is Shukra Sara.

- a. Saumya - Gentleman
- b. Saumyapreksinaha - Gentle look
- c. Ksirapurnalochana - Eyes appearing filled with milk
- d. Praharshabahula - Cheerfulness
- e. Snigdha-vrittisamhata- Dasanaha - Teeth which are unctuous, round, strong, dense & even
- f. Prasanna - Snigdha-varnasara - Pleasant - unctuous voice and appearance
- g. Bhrajisnuta - Dazzling appearance
- h. Mahaspica - Large buttocks
- i. Stripriya - Loved by women
- j. Upabhoga balavana - Virile
- k. Sukha - Endowed with happiness
- l. Aishwarya - Prosperity
- m. Arogya - Health
- n. Vitta - Money
- o. Sammana - Honor
- p. Apatyabahula (many offspring)

PHYSICAL CHARACTERS REPRESENTING SEMEN

Shukra's characteristics have been mentioned by Acharyas. The characteristics are mentioned as Shuddha Shukra Lakshanas.

- Sphatikabha (crystalline), Ghrita- Ksaudra-Taila- nibha (color that of ghee, honey, oil)
 - Madhugandhi (smelling like honey)
 - Drava (liquid), Picchila
 - Bahu (abundant), Bahala (thick)
 - Avisra (no bad smell), Shukla (white)
 - Kaphavarga
 - Madhura (sweet), Snigdha (unctuous)
 - Rupadravya, Shukra, and Semen are represented by Sara (mobile), Sandra (dense), and Ambasi kinchitmajjati (which dips in water).
1. Sphatikabha refers to the white and transparent colour of sperm.
 2. The usual 1/2 Anjali Pramana indicates the quantity of semen represented by Bahu / Bahala.
 3. Madhugandha is the distinct odour provided to sperm by its many components.
 4. The Madhura flavour of Shukra comes from the seminal plasma's fructose.
 5. The PH of the sperm is known to as Avidahi, which means that it does not cause a burning sensation after ejaculation, showing that it is neither acidic nor extremely alkaline.
 6. Due to diverse components of seminal plasma, characteristics like Drava (liquid), Picchila (viscous), Snigdha (unctuous), and Sara (fluid) show normal consistency of semen. The semen that is released during great pleasure of coitus is also indicated by the tendency to flow out (Pravana Bhava).

CHARACTERS REPRESENTING SPERM

Shukra's characters allude to sperm, which is a component of Retas.

- 1) The vitality, motility, count, and proper morphology of sperms may all be linked to Phalavata. All of these sperm have the ability to fertilise the ovum, which is Garbhakara.
- 2) Anutva denotes insignificance, whereas sperm is a tiny structure.

CHARACTERS REPRESENTING BOTH SPERM AND SEMEN

Shukra's density includes characters like Guru and Ghana, which may be used to refer to both sperm and semen. Shukra Dhatu also occupies the whole body, as each Dhatu is situated in every region of the body. Shukra Dhatu Sthana has been described in many ways by various academics, including:

- ❖ Similarly, to how fragrance is not present in a flower bud but is discovered when it blooms, the Shukra is the same. Shukra is present in the body in Avyakta roopa in childhood, however when the young stage is reached, Shukra functions arise in the body.
- ❖ Shukra is found in all parts of the sentient body, including sugarcane juice, curd ghee, and sesame seed oil.
- ❖ Shukra Dhara Kala is the seventh kala, and it penetrates everyone's whole body. Shukra, like ghee in milk and sugarcane juice, is invisibly ubiquitous, which implies Shukra is present throughout a person's body.

Shukra Dhatu is found in every cell of the body, according to the sources listed above. Because every cell has the ability to divide, we may deduce Shukra Dhatu's Garbhpadana function. Shukra Dhatu is associated with valour, orgasm during sexual intercourse following ejaculation, pleasure or love and affection for the other sex, physical strength, and exhilaration. Shukra Dhatu is also associated with seed, or reproduction. Acharya Dalhana comments here, the presence of Shukra Dhatu causes Dhairyam, or heroism in the body. It's lack makes eunuchs cowardly. Enthusiasm and excellent anabolism are characteristics of physical strength.

CONCLUSION

Shukra Dhatu is the most superior of the seven Dhatus. Because it is the result of Dhatu parinamana, it is regarded as the essence of all Dhatus. When he feels sexual desire, he expresses Shukradhara kala, which is present throughout his entire body. Every cell has the ability to duplicate and understand the Garbhpadana. Shukradhatu is a Jala mahabhuta pradhana that is generated from Aahar Rasa via Majjadhatu. It is found in every cell of the body and plays an important role in reproduction; it is comparable to prostaglandins. Shukra's Abhivyakti suggests that, despite its inconspicuous presence since birth, its full expression happens only after a particular period, i.e. puberty. Dhairyam (sexual potency), Chyavanam (timely ejaculation), Preeti (love for partner), Dehabalam (physical strength), Harshana (sexual desire), and Beejaratha are the functions of the Shukra (to serve the function of beeja i.e., procreation). Harsha, Darshana, Smarana, hearing the voice, Sparshana, or performing sexual activities activates Shukra, which then travels to the testis and ejaculates it. In this study, all concepts related to Shukra Dhatu Utpatti (Formation) and Strava (Ejaculation) stated in Ayurved are summarised and simplified, making it easier for future readers and researchers to locate and comprehend the information in a quick and efficient manner.

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