

An Ayurvedic Perspective of Male Infertility: Review Article

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Abstract – Stress and lifestyle disorders are the most dominating issues faced by people in present scenario which leads to deterioration health of individuals. One such burning issue which is gearing up continuously is male infertility. One of the most common causes of male infertility has been found to be Oligozoospermia which means semen with a low concentration of sperm. For many decades, sperm concentration of less than 20 million sperm/ml, low or Oligospermic but recently WHO has reassessed sperm criteria and established a lower reference point, less than 15 million sperm/ml. Other than sperm count physical examination of semen is also essential which includes observation of its volume, colour, turbidity, liquefaction, viscosity, morphology and mortality. As per Ayurveda, Oligozoospermia can be correlated to Ksheen Shukra. Shukra is considered as one of the seven Dhatus and assigned with the function of bestowing the progeny. Even though none of the standard Ayurvedic Texts have mentioned about the count of sperm or it's motility but clearly mentioned the quality of semen in the form of "Shuddh Shukra Lakshanas". According to Acharya Sushrut Shuddh Shukra is White as Sphatik, Drava, Snigdha, Madhura and smells like Honey. For ruling out the cause of infertility Shukra Dhatu is examined and observed in Semen Analysis.

Keywords: Oligozoospermia, Ksheen Shukra, Shuddh Shukra Lakshanas.

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INTRODUCTION

Infertility is a health issue affecting average 8-12% of couples globally. Low sperm count (oligozoospermia) is one of the main causes of male infertility and it is correlated with Ksheen Shukra in Ayurveda. Infertility is defined as the inability to achieve pregnancy after one year of unprotected coitus. Male infertility is considered to be less complicated than female infertility, but can account for 30 -40% of infertility. Except for some physical defects, low sperm count (Oligozoospermia) and poor sperm quality are responsible for 90% of the cases. Oligozoospermia means decreased count of sperms. Etymological origin of the word OLIGOZOOSPERMIA is as: Oligo (few) + Zoo(live) + Sperm + Ia (condition).

According to Ayurvedic Literature, human body is made up of *Sapta Dhatus* and *Shukra Dhatu* is seventh among *Sapta Dhatu*¹. Among *Sapta Dhatu*, *Shukra Dhatu* is considered as the *Sar* of all other *Dhatus*. There is no clear description of Sperm in *Ayurveda* but there is description of four basic components responsible for fertility i.e. *Ritu*, *Beej*,

Kshetra, *Ambu* out of which *Beej* can be correlated with sperm. Various *Acharyas* have given the qualities of *Shuddha Shukra* and the pathological conditions of *Shukra Dhatu* have been elaborated under the name *Shukra Dushti*. *Acharyas* have described the qualities of *Shukra* as *Spatikabha*², *Madhugandhi*, *Drava*, *Picchila*, *Avisra*, *Madhura* and *Snigdha*. *Shukra Dushti* are eight different types of seminal pathologies mentioned in the classics. Semen Analysis is an investigation carried to assess the fertility of an individual and the findings in the analysis are the causes which lead to infertility. *Ksheen Shukra* is one of the eight *Shukra Dushti* mentioned in our classical texts and it's study is an important part to study the *Dosha* involvement in *Shukra Dushti* and *Ksheen Shukra*.

AIMS AND OBJECTIVES:

- To study the concept of *Shukra Dhatu* in detail and to compare, evaluate data available on *Shukra Dhatu*.

- To study the Ayurvedic aspect of Male Infertility i.e. Ksheen Shukra as mentioned in Ayurveda Classical texts.

MATERIALS AND METHODS:

- All classical texts available in Ayurvedic Literature were reviewed.
- Various research articles and manuscripts on Ksheen Shukra were thoroughly reviewed.
- Literary data collected were compared and analysed on classical background to find similarities, dissimilarities and its classical approach in accordance to modern science.

LITERARY REVIEW:

The term *Ksheen Shukra* comprises of two words *Ksheen* and *Shukra*. The term *Ksheen* is derived from “*Kshi+kla*”. This has got the meanings like *Sukshma*, *Abala*, *Durbala*, *Kshama* and *Tanu*. The word *Shukra* is derived from the Sanskrit Root “*Suc-Klede*” meaning purity. Literally, *Shukra* means the one which is in pure state, bright and white.

Nirukti and Paribhasha of Ksheen Shukra

Ksheen Shukra is a condition is a condition in which there is *Swamanaat Alpeebhuta Shukra*. The condition in which the quantity of *Shukra* is *Alpa* is termed as *Ksheen Shukra*.

► Paryaya of Ksheen Shukra

Acharya Sushrut and *Vagbhata* have used the term “*Ksheen Retas*” as a synonym of *Ksheen Shukra*.

► Definition of the term Oligozoospermia:

According to Butterworth’s Medical Dictionary, Oligozoospermia is defined as a condition in which too few spermatozoa are present in the semen. Whereas WHO 2010 Oligozoospermia as the condition where the sperm concentration is less than 15 million/ml of semen.

Asht Shukra Dushti According to Acharya Charak and Sushrut:-

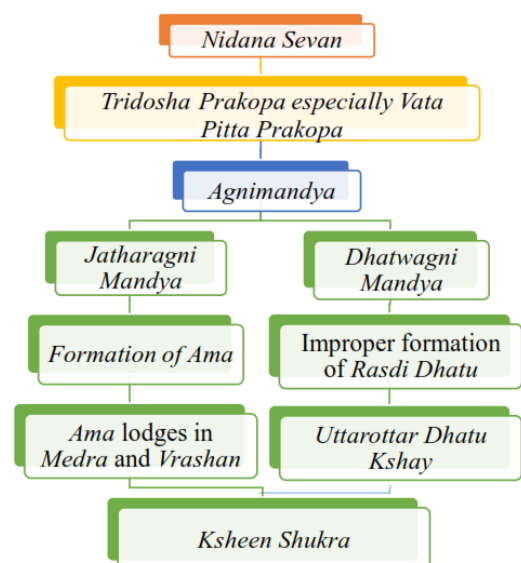
Acharya Charak ³		Acharya Sushrut ⁴	
Dosha	Shukra Dushti	Dosha	Shukra Dushti
Vata	Phenil	Vata	Vataja
	Tanu	Pitta	Pittaj
	Rooksha	Kapha	Kaphaj
Pitta	Vivarna	Rakta	Kunapgandhi
	Puti	Sleshma Vata	Granthibhuta
Kapha	Picchila	Pitta Shleshma	Putipuya
Raktadi Dhatu	Respective Dhatu Samshrushta	Pitta Vata	Ksheen
Vata Kapha	Avsadi	Sannipata	Mutrapurish Gandhi

Nidana of Ksheen Shukra:-

Acharya Sushrut and *Vagabhata* explain that *Vata* and *Pitta* are the two *Doshas* involved in the cause of *Ksheen Shukra*. *Vata* and *Pitta Prakopaka Hetus*, *Samanya Dhatu Kshaya karana* and *Shukra Kshaya Karana* are explained in various classics which are responsible for *Ksheen Shukra*:

- Ativyavaay⁵* and *Ativyayam*:- excessive sexual intercourse and exercise.
- Asatmya Ahara Sevan*:- intake of incompatible food.
- Akala Maithun*:- untimely sexual intercourse.
- Ayoni Maithun*:- coitus through *Marga* other than *Yoni*.
- Amaithun*:- No sexual intercourse for long time.
- Ati Ushna evam Ruksha Ahar Sevan*.
- Narinaam Arasajnanam*:- sexual intercourse with a woman who has no interest for sex.
- Ati Chinta evam Shok*:- Excessive thinking and grief.
- Atiyog of Shastr, Kshar and Agni Karma*.
- Vyadhi Karshan*:- deability due to disease.
- Vegdharan*:- Suppression of natural urges.
- Kshata*:- injury to *Vitapa Marma* causes *Alpa Shukra*.

Samprapti of Ksheen Shukra:-



Samprapti Ghatak of Ksheen Shukra:-

Dosha:- Tridosha especially Vata Pitta

Dhatu:- Rasa, Shukra

Strotas:- Rasavaha, Shukravaha

Agni:- Jatharagni, Dhatwagni

Ama:- Jatharagni Janya, Dhatwagni Janya

Strotodushti:- Sangha

Adhishthana:- Medra, Vrishana

Vyakt Sthan:- Shukra, Vrishana, Medra

Rogamarg:- Madhyam

Vyadhiswabhava:- Chirkari

DISCUSSION:

Shukra Dhatu is the last dhatu sequentially even in the terms of its production and therefore is considered as the *Saar Bhaag* of all other six Dhatus. It's the essence of all dhatus hence its level in body has to be maintained very carefully by consuming nourishing foods and leading a healthy life. At present there are many causative factors which ultimately lead to a very crucial issue that is Oligozoospermia a sort of male infertility which is ruled out by Semen Analysis. Causes of this severe problem has been found out to be:-

- ▶ Drugs, Alcohol, Smoking.
- ▶ Strenuous riding(bicycle riding, horse riding)
- ▶ Medication including androgens
- ▶ Obstruction in Vas Deferens
- ▶ Infection – eg. Prostatitis.
- ▶ Ejaculatory duct obstruction.
- ▶ Thermal causes
- ▶ Environmental factors.

Ayurveda has mentioned and elaborated about Shukra Dhatu, it's Guna, Dushti and Kshay. Modern Science has explained the Physical examination of semen which can be seen in Ayurvedic Classics too.

- ▶ **Volume:-** The normal volume of seminal fluid ranges between 2 ml and 6 ml per ejaculation. Any semen sample which measures below 1.5 per ejaculation is due to morbid Vata in Vataj Shukra Dushti.

- ▶ **Colour and Turbidity:-** Shukra is Shweta or of the colour of Sphatika(alum). Semen is normally translucent or whitish-gray opalescent in colour. The presence of blood in semen is abnormal and it points towards Raktdhatu Upsrusht Shukra Dushti.

- ▶ **Semen acid-base balance (pH):-** The pH of normal semen is slightly alkaline ranging from 7.2-7.8. The Avidahi quality of shukra can be affected if pH of the semen sample is on the acidic side making the sample vidahi.

- ▶ **Liquification:-** Semen is normally produced as coagulum. Semen specimen will usually liquefy within 60 minutes. The failure to liquefy within one hour is abnormal showing signs of Kapha Dosha.

- ▶ **Viscosity:-** Non-liquification and excessive viscosity are two separate conditions. The character of semen with excessive viscosity may be because of kaphaj Dhushti(Sushrut) or avsadi i.e. vata kaphaj (Charak) type of Shukra Dushti.

- ▶ **Sperm Count:-** According to WHO Guideline Manual for the Examination and Processing of human semen, 2010 says more than 15 million/ml of sperm cells per ejaculate is said to be normospermic less than this is said to be Oligospermic i.e. Ksheen Shukra. Mild Oligozoospermia⁶ is 10 to 15 million sperm/ml. moderate is 5 to 10 mlsperms/million and severe oligospermia is diagnosed when sperm count falls between 0 to 5 million sperm/ml.

- ▶ **Morphology:-** A normal sperm has a smooth oval shaped head i.e. 5-6 micrometers long and 2.5 to 3.5 micrometers broad. Any change in its morphology is due to morbid Vata and Kapha Dosha.

Acharyas in Brahad Trayee has mentioned symptoms of Ksheen Shukra as follows:-

- ▶ **Daurbalya⁷:-** Weakness
- ▶ **Mukhshosh:-** dryness of mouth
- ▶ **Pandutva:-** Pallor
- ▶ **Sadan:-** Flaccid body
- ▶ **Shram:-** fatigue
- ▶ **Klebya:-** Loss of libido

- ▶ **Medra Vrishan Vedana**⁸:- Pain in penis and Scrotum
- ▶ **Ashakti Maithun**:- Not able to perform well during sexual intercourse
- ▶ **Chirat Prasek**:- Post mature ejaculation
- ▶ **Alp Rakt Shukra Darshan**:- Blood mixed with semen is ejaculated sometimes.

According to Modern System of medicine OligoZospermia represents following signs and symptoms:-

- ▶ Problems with sexual function- eg- low sex drive or difficulty in maintaining erection⁸.
- ▶ Loss of Libido
- ▶ Generalised weakness
- ▶ Fatigue
- ▶ Pain, swelling or lump in the testicle area.
- ▶ Decreased facial or bodily hair

These are much like mentioned in our classical texts and can be easily managed by various *Vajikaran* Medicines and Therapies mentioned in Samhitas with improvement in lifestyle i.e following proper *Ahara* and *Vihara*.

CONCLUSION:

Shukra Dhatu is an important part of Human Physiology which needs to be maintained and preserved as it is responsible for progeny which is the most essential part of life. When *Shukra Dhatu* lacks its quality and possesses any sort of *Shukra Dushti* it generates obstacles in the progeny and embarrasses a man socially. Hence it is of utmost importance and must be taken care of that it is present in proper proportion and bears its best quality. Oligozoospermia, i.e. *Ksheen Shukra* is an accelerating issue of the present world and there is a need of an hour to seriously combat with this problem because it disturbs the physical as well as mental well-being of individuals. The conceptualised study is to understand what exactly it is and to get rid of it with various methods quoted by *Acharyas* in our classical texts.

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