



## World Journal of Pharmaceutical Science & Technology

Journal homepage: [www.wjpst.com](http://www.wjpst.com)

### Review Article

#### MANAGEMENT OF OLIGOSPERMIA- A BOON THROUGH AYURVEDA

**Dr. Upender Pal Khatkar<sup>1</sup>, Prof. (Dr.) Ramkishor Joshi<sup>2</sup>, Dr. Harish Bhakuni<sup>3</sup>**

1. PG Scholar, PG Department of *Kayachikitsa*, NIA, Jaipur.
2. Professor and Head of PG Department of *Kayachikitsa*, NIA, Jaipur.
3. Associate professor, PG Department of *Kayachikitsa*, NIA, Jaipur.

#### Address for correspondence:

**Dr. Upender Pal Khatkare**, PG Scholar, PG Department of *Kayachikitsa*, NIA, Jaipur.

E-mail- [upenderkhatkar1978@gmail.com](mailto:upenderkhatkar1978@gmail.com)

Received: 18-10-2022, Revised: 1-11-2022, Accepted: 10-11-2022

#### ABSTRACT

The Oligozoospermia is one of the conditions related to male infertility which associated with low sperm count. Male infertility is one of the burning problems now a days and incidences of this problem increases day by day due to the disturbed pattern of living style. Ayurveda the science of Indian medical system described various terms related to male infertility such as; *Kshina Shukra*, *Kshina Retasa*, *Alpa Retasa* and *Shukra Dosha* which resembles conditions associated with oligozoospermia. Ayurveda also described various treatment modalities for the management of oligozoospermia such as use of herbs & formulation, conduction of balanced life style and diet control, etc. This article presented a conclusive review on ayurveda perspective of oligozoospermia and its management.

**Keywords:** Oligospermia, low sperm count, *Ksheena Shukra*, *Shukra Dosha*

#### INTRODUCTION:

*Dharma*, *Artha*, *Kama* and *Moksha* are the four tenets in life. Without the achievement of these, the aims of life are not achieved. A part from achieving these is producing offsprings. *Ritu*, *Ksheetra*, *Ambu*, *Beeja* are

the essential causes for the formation of *Garbha*, among these Male *Beeja* (Sperm) plays an important role in conception any, vitiation in this may lead to male infertility. Infertility is a social stigma. It is a problem of global proportions, affecting on an average 8-12% worldwide. When infertility is taken as a whole, problems due to the male factors account to 40%. According to Butterworth's Medical Dictionary, Oligospermia is defined as a condition in which too few spermatozoa are present in the semen. Whereas WHO 2010 defines Oligospermia as the condition where the sperm concentration is less than 20 mil/ml of semen.

A number of factors involved in the genesis of this condition include age, infectious agents (such as *Chlamydia trachomatis*), along with testicular factors, mitochondrial changes, environmental pollutants and subtle hormonal changes. Excessive intake of alcohol may also decrease the semen quantity. *Ksheena Shukra* is a condition in which there is qualitative and quantitative decrease of *Shukra* leading to infertility. *Ksheena Shukra* in some conditions can be correlated with Oligospermia. Ayurveda, the holistic medicine describes potent drugs and efficient therapeutic procedures to face the problem of infertility.

Ayurveda considered oligozoospermia as *Napunsakata*(impotency) and described *Beejopghat*, *Kshayaj* and ageing as major causative factors of disease.<sup>i</sup> Consumption of *Ruksha*, *Tikta*, *Kashaya*, *Amla* and *Ushna Ahara* are other triggering factors along with *Jara*, *Chinta*, *Shoka* and *Krodha*. As per ayurveda excessive loss of *Shukra Dhatu* may occur due to the vitiation of *Pitta* Dosh along with mentioned factors.<sup>ii</sup>

### **AYUREVDIC CONCEPT:**

Ayurveda is a science of life, which emphasizes on two main objectives of maintenance and promotion of positive health and management of the diseases. Dietary habits and lifestyle modalities play a major role in the causation of any disease. *Dinacharya*, *Ritucharya*, *Aachara Rasayana*, *Sadavritta*. With the onset of time most of the dietary habits like *Virudhahara*, *Virudhvihara* *Dagdahara*, *Chinta*, *Shooka*, *Krodha*, sedentary life style where people prefer to take outside food more often because of busy work schedules, have made humans more vulnerable to many diseases than ever before. Male having pathological semen reports include low sperm count, poor sperm motility, low sperm volume, low or absence of fructose and sperm functional tests. The incidence of male infertility may vary from place to place and nation to nation, however magnitude of the problems remains the same. *Ksheena Shukra* is a disease of *Shukra* in which both quality and quantity of *Shukra* may be altered, when in the body *Tridosha* is vitiated mainly *Vata Dosh* and *Pitta Dosh* then they derange the normal quality & quantity of *Shukra Dhatu*. As a result of the vitiation of *Vata* and *Pitta Dosh* as the channels which carry *Shukra* (*Shukravahasrotas*) undergoes *Dushti*, which further incapacitates the individual to conceive leading to infertility. *Ksheena Shukra* as per ayurvedic text are - *Daurbalya* (weakness), *Mukhshosha* (dryness of mouth), *Pandutva* (pallor), *Sadana* (malaise), *Shrama*

(dyspnoea on exertion), *Klaibya* (impotence) and *Shukra Avisarga* (unable to ejaculate). *Ksheena Shukra* can be co-related with oligospermia. Oligospermia is characterized by the lowered sperm count which is less than 20 million/ml from the normal range 20-160 million/ml. The corresponding decrease in the sperm count is responsible for the inability for conception. *Shukra* is the *Param Sara* of *Ahara Rasa*. The function attributed to *Shukradhatu* as well as the semen is *Garbhotpadana*. *Vajikarana* is such specialized branch of Ayurveda which involves a detailed description on various abnormalities of *Shukra* and their modes of treatment. It also includes details of *Shukra Janana*, *Shukra Praseka* and various aspects of *Shukra* in a *Swastha*. Many *Yogas* have been explained which vouch on curing *Shukra Dosha* and improving the quality & quantity of the *Shukra*. Also, in the present era, due to the change in life style, hectic activities, busy life schedules and lack of time, many a time's patients though fit are not ready to undergo *Shodhana* procedures.

**Nirukti:** *Ksheena Shukra* is a condition in which there is *Swamanaat Alpeebhuta Shukra*.<sup>iii</sup> The condition in which the quantity of *Shukra* is *Alpa* is termed as *Ksheena Shukra*.

**Definition:** The term *Ksheena Shukra* comprises of two words *Ksheena* and *Shukra*. The term *Ksheena* 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.<sup>iv</sup>

**Paryaya of Shukra:** *Paryaya* of *Shukra* mentioned in *Amarakosha* is *Paurusam* i.e. the character which is inherent in *Purusa*, *Pumsatva*: the fertility factor essential for conception, *Ananda Samudbhava*: this indicates the matter which is ejaculated at the time of orgasm or extreme pleasure, *Majja Samudbhava*: the substance which is formed out of *Majja Dhatu*, *Veerya*: the factor responsible for any action, *Retas*: the matter which is ejaculated at the time of sexual intercourse;, *Tejah*: that which shines, *Beejam*: that which has the capacity to give rise an offspring

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

**Nidana of Ksheena Shukra:** Acharya Sushruta and Vagbhata explain that *Vata* and *Pitta* are the two doshas involved in the causation of *Ksheena Shukra*. *Vata* and *Pitta Prakopaka Hetus*, *Samanya Dhatu Kshaya Karana* and *Shukra Kshaya Karana* are explained in various classics which are responsible for *Ksheena Shukra*.

- *Ativyavaya* and *Ativyaayama* – excessive sexual intercourse and exercise
- *Asatmya Ahara Sevana* – intake of incompatible food
- *Akala Maithuna* – untimely sexual intercourse

- *Ayoni Maithuna* – coitus through *Marga* other than *Yoni*
- *Amaithuna* – No sexual intercourse for long time
- Intake of food which is having more *Tikta*, *Kashaya*, *Lavana* and *Amla Rasa*, *Ruksha Guna* and *Ushna Veerya*
- *Narinaam Arasajnanam* - Sexual intercourse with a woman who has no interest for sex
- Excessive *Chinta* (thinking) and *Shoka* (excessive grief).
- *Atiyoga* of *Sastra*, *Kshara* and *Agni Karma*
- *Bhaya* (Fear), *Krodha* (Anger) and *Abhichara Karma* (black magic)
- *Vyadhi Karshana* (debility due to diseases)
- *Vegadharana* (Suppression of urges)
- *Kshata* – injury (Injury to *Vitapa Marma* causes *Alpa Shukrata*)

### **Pathological Consideration:**

Ayurveda literature quoted various pathological conditions responsible for male infertility (oligozoospermia). They are *Doshaja Shandtva*, *Vyadhijanita Shandtva*, *Jarasambhavaja Shandtva*, *Shukrakshayaja Klaibya*.

*Doshaja Shandtva*: This condition involves vitiation of *Shukra* by *Tridoshic* imbalance; *Katu-Amla-Lavana Atisevana* may vitiate *Soumya Dhatu Kshaya* and *Shukra*, this condition further associated with *Pitta Vruddhi* resulted *Shukrakshaya*.

*Vyadhijanita Shandtva*: *Medhrarogas* and *Marmacheda* may also leads *Shukraksaya* which are associated with vitiation of *Vata-Dosha* and *Dhatukshaya*.

*Jarasambhavaja Shandtva*: The *Vridhavasta* also results *Shukrakshaya* and *Dhatukshaya* due to *Avrashyasevana*. *Vridhavasta* predominant by *Vata Prakopa* and *Kaphakshaya* which further leads *Dhatukshaya* and *Shukrakshaya*.

*Shukrakshayaja Klaibya*: Excess indulgence in sex may lead regression in *Shukradhatu* and low quantity of sperm.

**Ayurveda Management:** *Apyayana*, *Prasadana*, *Upachaya* and *Janana* are basic principle approaches for the management of male infertility.

- *Apyayana*: Nourishment of dhatu using *Goghruta*, *Navnita*, *Dadhi*, Milk and *Mamsa* which resemble *Gunas* of *Shukra*.
- *Prasadana*: Cleansing or detoxification using *Shodhana karma* which helps medicine to offers nourishment of *Shukra Dhatu*.
- *Upachaya*: Spermatogenesis using drug like *Kapikachu* which offers *Viryavardhaka* effect.
- *Janana*: Regeneration using drugs like *Yashtimadhu* and *Musali*

Ayurveda also described *Shamana* and *Shodhana Chikitsa* for the management of male infertility: Ayurveda emphasized *Vajikarana Tantra* for the management of oligospermia using *Rasayanas* and *Vajikara Dravyas* (virilificatory or aphrodisiacs drugs) along with *Panchakarma*. Diet and lifestyle modifications help in better conception and healthy offspring.

*Shodhana Chikitsa*: *Shodhana* procedure performs before using *Vajikarana* drugs. *Virechana* and *Basti* are major *Shodhana* procedures employed for the treatment of *Shukra Doshas*, *Klaibya* and oligozoospermia<sup>v</sup>.

*Virechana*: *Virechana* recommended for *Shukra Dosha* and *Klaibya*.

*Basti*: *Basti* used for *Kshina Shukra Vajikaroti*, following approaches of *Basti Karma* recommended in male infertility: *Kshira Basti* with *Mamsarasa* to increase *Shukra Dhatu*. *Yapana Basti* in *Shukra Dosha* and *Klaibya*. *Guduchyadi Niruha Basti* for *Viryavardhana*. *Uttara Basti* useful in *Shukra Dushti*.

**Ayurveda Formulation for Oligozoospermia:** Herbs recommended for oligozoospermia are *Shatavari*, *Ashwagandha*, *Amla*, *Gokshura*, *Vidaari*, *Shweta Musli*.

- *Chandraprabha Vati*: *Chanderprabha Vati* consisted of different natural ingredients such as; *Guggul*, *Karpoor*, *Vacca*, *Mustak*, *Haridra*, *Amalaki*, *Vidanga*, *Guduchi*, *Pippali*, *Lavan*, *Dalchini*, *Tejpatta* and *Ela*. All these ingredients improve functioning of male reproductive organs.
- *Atirasadi Churna*: It comprises of *Safed Musli*, *Kali Musli*, *Semal Musli*, *Gokshura*, *Shatavari*, Silk Cotton, Asparagus, *Ashwagandha*, *Akarkara*, *Vidari Kand*, *Safed Behmen*, *Jaiphal*, *Taalmakhana* and *Kesar*. *Atirasadi Churna* offers aphrodisiac property.
- *Shilajit Capsules*: *Shilajit* capsules contain pure extract of *Shilajit* (Asphaltum), which helps to improve process of spermatogenesis. This herb offers beneficial effects in oligozoospermia and gives satisfactory results in case of male infertility.

- Tribulus Power: It contains pure extract of *Gokshura*, helps to increase testosterone levels and thus boost functioning of sex organs. Maintain good sperm health and act as effective remedy for the treatment of oligospermia.
- Tribull Oil: This oil contains various herbs like *Shatavari*, *Ashwagandha*, *Gambhari Chal*, *Kaner* root and *Vjradanti*. This oil improves functioning of male reproductive organs and offers symptomatic relief in low sperm count.

<b>Pathya for the Ksheena Shukra</b>	<b>Apathya for the Ksheena Shukra</b>
<i>Sarpi Ksheera</i> and <i>Madhura Aahar ras aushadhas</i> , <i>Avidahi Dravyas</i> .	<i>Katu</i> , <i>Theekshna</i> , <i>Vidahi</i> and <i>Tikta Dravyas</i>
<i>Aahara: Kshira, Dadhi, Ghrita, Taila, Vasa, Majja, Chataka mansarasa, Ikshu, Sharkara, Madhu, Raktashali, Maasha, Godhuma, Khajura, Amraphala, Priyala, Rasala.</i>	<i>Aahara: Atikatu Atitikta Atilavana Amla Rasasevanam, Shaaka, Mastu, Takra, Sarshapa Taila.</i>
<i>Vihara: Abhyanga, Snanna, Maala Dharana, Padatrana Dharana</i>	<i>Vihara: Atimaitihuna, Amaithuna, Akalmaitihuna, Ayonimaitihuna, Chinta, Atisaahasa, Shukra Vega Dharana.</i>
<i>Aushadha: Ardraka, Ashvagandha, Shatavari, Musali, Lasuna, Bala, Goksura, Atmagupta, Jivanti, Shringataka.</i>	<i>Aushadha: Dhanyaka, Kulathya, Atasi, Maricha, Yavani, Chanaka, Katabhi.</i>

## CONCLUSION:

The literary study concluded that drug possess *Snigdha Guna*, *Balya* and *Vata-Sthapana* properties offers good effect in oligozoospermia. *Tikta Rasa* and *Laghu Guna* of some drugs produce *Prakruta Sapta Dhatus* leads formation of potent *Shukra Dhatu*. Herbs like; *Shweta Musli* act as tonic to rejuvenate the reproductive system. *Shilajit* also act as restorative and rejuvenating tonic improves physical performance and harmonious health. Similarly, *Madhura Rasa*, *Sheeta Virya*, *Vrishya*, *Brimhana* and *Vatapittahara* properties of many drugs offers beneficial effects in oligozoospermia.

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