



## AYURVEDIC VIEW KSHEENA SHUKRA (OLIGOZOOSPERMIA) -MALE INFERTILITY AND ITS MANAGEMENT

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**ABSTRACT:** - Male infertility can be defined as an inability to induce conception, due to defect in spermatic functions. The male carrying pathology in semen production includes low sperm count, volume, motility, abnormal forms and sperm functional which impairs the normalcy of the semen and is considered as the main reason for the infertility. Ayurvedic treatment includes medicines, herbal aphrodisiacs, lifestyle changes, dietary changes, psychological therapy, and Panchakarma (detoxification) treatment procedures. Ayurveda give emphasis to the treatment of



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shukradushti with dhatuvridhikara, balakara, Shukrajanaka and Shukrapravartaka those in-terms of increasing the sperm count and motility by using vajeekarana dravya.

**KEY WORDS:** - Ksheena Shukra, Kshina Retasa, Alpa Retasa, Shukra dosha,

**INTRODUCTION:** - Male infertility is one of the burning problems now a days. Incidences of this problem increases day by day due to change in lifestyle. Causes of male infertility include abnormal sperm production or function and/or impaired delivery of sperm. Oligospermia is the male infertility issue defined as low sperm concentration in the ejaculation. As per World Health Organization (WHO), a low sperm count is less than 20 million sperm/ml. Normal sperm count varies from 20 to 150 million sperm per milliliter. Ayurveda described various terms related to male infertility such as; Kshina Shukra, Kshina Retasa, Alpa Retasa and Shukra dosha which resembles conditions associated with oligospermia.

Low sperm production, abnormal sperm function or blockages along semen tracts can cause male infertility. The World Health Organization (WHO) classifies sperm counts at or above 15 million sperm per milliliter (mL) of semen as average. Anything below that is considered low and is diagnosed as oligospermia.

oligospermia is 10 to 15 million sperm/ml.

Moderate oligospermia is considered 5 to 10 million sperm/ml.

3) Severe oligospermia is diagnosed when sperm counts fall between 0 and 5 million sperm/ml.

- 1) Mild
- 2)

**Semen deficiencies are often labeled as follows: `**

- 1) Oligospermia or Oligozoospermia – decreased number of spermatozoa in semen.
- 2) Aspermia – complete lack of semen
- 3) Hypospermia – reduced seminal volume
- 4) Azoospermia – absence of sperm cells in semen.
- 5) Teratospermia – increase in sperm with abnormal morphology
- 6) Asthenozoospermia – reduced sperm motility

There are various combinations of these as well, e.g., Teratoasthenozoospermia, which is reduced sperm morphology and motility. Although low sperm counts are often associated with decreased sperm motility and increased abnormal morphology and thus represent “Oligoasthenoteratozoospermia”.

Asthenozoospermia is the most common identifiable anomaly related to male infertility found in semen analysis implies the motility of spermatozoa is lower than 50% of active motile sperms

**Characteristic features of fertile shukra / retas (Semen) are said to be: -**

- 1) Dravata (liquidity) 2) Bahalam (thick), 3) Guru (heavy), 4) Madhura (sweet) 4) Snigdha (unctuous), 5) Avisra (without any putrid smell), 6) Picchila (viscous) 7) Spatikabha (grayish white like alum), and 8) Taila kshoudra nibha (consistency between sesame oil and honey)

Ayurveda described eight pathological conditions of retas (semen), characteristic features, and their management but differed in nomenclature or conditions. The following is the list of summarized pathological conditions of retas (semen):

1) Phenila (frothy), 2) Tanu (thin), 3) Ruksha (dry), 4) Vivarna (discolored) 5) Ati-Picchila (hyper-viscous), 6) Putipuya (pyospermia), 7) Anyadhatusamsrista (associated with tissue components), 8) Avasadi (sedimentation), 9) Kunapagandhi (smell that of dead body) 10) Kshina (low volume), 11) Grandhibhuta (nonliquefaction) 12) Sannipata (smell like that of urine/feces).

After describing the method of examination and diagnosing various pathological conditions of retas / shukra, Ayurveda also mentioned the line of management specific to each clinical condition.

In Ayurveda, eight types of Shukra Dushti are mentioned viz Vataja, Pittaja, Kaphaja, Granthibhuta, Putipuyanibham, Mutrapurishagandhi and Ksheena . Acharya Sushruta clearly characterizes the condition of Ksheena Shukra Vikara as diminution of semen quality along with reduced motility. It is enclosed in one among the varieties of AsthavidhaShukra Dushti having vitiation of Vata and Pitta Dosha which may prompt to male infertility

**Ksheena Shukra Lakshna It can be classified into Sarvadehagata like:-** 1) Daurbalya, 2) Bharma, 3) Panduta, 4) Sandhishula, 5) Sadana, 6) Shosha, 7) Shrama.

**Sthanika Lakshna like:-** 1) Mukha Shosha, 2) Timira Darshana, 3) Medhra Vedana, 4) Vrishana Vedana, Medhra Dhumayana, Vrishana Dhumayana,

**Manasika lakshana include:** - 1) Stridvesha

**Maithungata Lakshnas are:** - 1) Klaibya 2) Acheshta 3) Maithune Ashakti, Shukragata, Shukra Lakshana is i.e., Avisarga, Chirat Praseka, AlpaRaktayukta, Majjamishrita Shukra Pravritti.

**Ayurveda considered physico-chemical features for the analysis of semen**

**1) Phenila (frothy):** - It is noticed that semen samples forming bigger bubbles (approximately more than 0.5 cm size) may be considered as phenila-positive.

**2) Tanu (thin):** -Thin and translucent semen samples are seen in case of azoospermia or severe oligozoospermia. Sperm count and translucency are inversely proportional.Hence, sperm count may be taken as a parameter for tanu.

**3) Ruksha (dryness):** - increased pH (>8.5) of seminal plasma may be considered as ruksha as at this pH, seminal plasma exerts reverse osmotic pressure on sperms and thus hampers normal function of spermatozoa. Interestingly administration of drugs possessing snigda (unctousness) property antagonistic to ruksha, showed the decline of increased pH.

**5) Granthibhuta retas (non/in-complete liquefaction):** - The semen which is not liquefied or incompletely liquefied is said to be vitiated by Kapha and Vata. The sperm do not attain their full motility until liquefaction of the coagulum occurs. Men whose semen fails to liquefy spontaneously are likely to be sub-fertile; their semen remains highly viscous and sperm movements in such semen are very sluggish.

Kshina shukra is a pathological condition caused by vitiated Vata and Pitta. Oligospermia oligo azoospermia resembles with Kshina Shukrais a condition in which sperm count is gets reduced both qualitatively and quantitatively

Ayurveda give emphasis to the treatment of shukradushti with dhatuvridhikara, balakara, Shukrajanaka and Shukrapravartaka those in-terms of increasing the sperm count and motility by using vajeekarana dravya.

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.

**Effect of Shodhana Karma:** With the Shodhana procedure Shukra also increased in qualitative as well as quantitatively. In Ksheena Shukra main vitiated Dosha are Vata and Pitta, in order to remove the vitiated Pitta Dosha, Virechana is administered. It also eliminates the Srotorodha and active transformation of Dhatu through Dhatvagni Vyapara and the most desirable Shuddha Shukra is procured. The whole process helps in eliminating the free radicals (oxidants) present in the micro circulatory channels of Shukra Vaha Srotasa, which interferes with the function of Shukra and by doing so, increases the activity of Shukra (motility) as well as Shukra Vaha Srotasa and the respective Dhatvagni thereby facilitating the production of more Shukra Dhatu. (Volume, Count). Virechana is an important modality and eminent bio cleansing process for vitiated Pitta Dosha. Through Shodhana, Srotoshudhi (Clearing of channels) can be accomplished.

Application of Vajikarana Aushadha following Virechana gives better result due to better absorption and utilisation without any other complications.

**Classification of Vajikara drugs for semen disorder:** - Vajikara Dravyas are classified in to following categories.

**Shukrajanaka or Shukra Vriddhikara:-** which initiates and enhances the spermatogenesis (Shukrajanana Kriya) by nourishment of Dhatu in sequential pattern from Rasa to Shukra Dhatu. For example, Mamsa, Ghrita, Ashvagandha, Musali, Sarkara and Shatavari etc.

**Shukra Pravartaka or Shukra Srtikara:** which causes proper ejaculation of semen. For example, Sankalpa, Ucchata, Brhati etc.

**Shukrajanaka-Pravartaka or Shukrasrti Vriddhikara:** which perform both the above said function. For example, Ghrita, Kshira, Mamsa, Bhallataka Phalamajja. In addition to these varieties of Vajikara drugs,

**Acharya Sarangadhara has mentioned some more types viz.**

**Shukra Stambhaka drugs:** - e.g., Nagabala, Jatiphala;

**Shukrarechaka drugs:** - e.g., Brhatiphala;

**Shukrashoshini drugs:** - e.g., Haritaki.

Sushruta has stated that Vajikarana Tantra is specially meant for treatment of Shukra Dushti,

**Alparetas:** is a genetic or congenital condition of Shukra in which level of Shukra is below than its normal values and Prakriti (genetic constitution) is responsible for it. In this condition, Apyayana i.e., preservation of the present status and prevention of further deterioration in semen profile is advocated.

**Dushta Shukra:** is managed by Prasadana; i.e., the drugs, which are alleviating the Doshas are advised.

**Ksheena Retas:** In this condition, subnormal quality of Shukra is to be treated with Upachaya i.e., nourishment to achieve the normal and optimal level of Shukra.

**Vishushka Retas:** - In this condition, there is low level of Shukra due to geriatric changes this man has to be brought to normalcy by administering Shukra Janana drugs.

Male infertility can be cured with various other Ayurvedic medicines, some of them being Herbs traditionally used for vajikarana and shukral purposes: -

Various research studies indicate that shilajita exhibits antioxidant, anti-inflammatory, adaptogenic, immunomodulatory, and antidyslipidemic properties. This is the corner stone of sexual reproduction. Spermatogenesis produces mature male gametes, commonly called sperm (specifically known as spermatozoa) which are able to fertilize the counterpart female gamete. Furthermore, animal and human data support use of shilajit as a revitalizer, enhancing physical performance and relieving fatigue with enhanced production of ATP (Adenosine triphosphate). Impaired adenosine signaling is associated with erectile dysfunction (ED)

**Churna:** - 1) Kapikacchu (*Mucuna pruriens*) 2) Vidarigandha (*Pueraria tuberosa*) 3) Ashvagandha (*Withania somnifera*) 4) Kokilaksha (*Asteracantha longifolia*) 5) Jatamansi (*Nardostachys jatamansi*), 6) Shweta Musli (*Asparagus adscendens*), 7) Shatavari (*Asparagus racemosus*), 8) Kshira Vidari (*Ipomea digitata*) etc.

**Shilajit** boosts sperm, enhances total sperm count, Improves semen motility.

**1) Kapikacchu (Mucuna Pruriens Bak.):** - which has been found to increase sperm concentration and motility.

**2) Gokshura (Tribulus terrestris Linn.):** - which raises testosterone levels.

**3) Ashwagandha (Withania somnifera Dunal.):** - which enhances spermatogenesis via a presumed testosterone-like effect.

**4) Shatavari (Asparagus racemosus Willd.):** - which appears to enhance fertility by reducing oxidative stress.

**5) Yashtimadhu (Glycyrrhiza glabra Linn.):** - found to improve semen quality.

**6) Bala:** - helpful in the restoration of sexual health and enhances spermatogenesis. ] It is described as an herb for improving ejaculatory performance and delaying the time of ejaculation

**7) Purnnava (Boerhaavia diffusa)** is useful for the male reproductive system and acts as an aphrodisiac, increasing libido, erection, and quality and quantity of semen

**Compound drugs:** - 1) Vajikarana Yoga, 2) Shatavaryadi Yoga, 3) Kokilikshadi Churna, 5) Amalaki Rasayana, , 6) Narasimha Churna etc.,

**Laghu Panchmoola** is effective in the normal delivery of sperms

**Vati/ Tablet:** - 1) Chandra Prabha Vati 3) Agnitundi Vati 3) Shilajatu Rasayan,

**Ghritam:** - 1) Sukumara Ghritam 2) Mamsa Sarpi 3) Kusmanda Ghritam 4) Kalyanaka Ghrtam 5) Asvagandhai Ghritum

**Phalasarpi** mentioned in Guhyaroga Pratisedha Adhyaya of Ashtanga Hridaya Uttara sthanam. This formulation has been directly indicated in male and female infertility. And profound action in increasing motility

**Avaleha:-** 1) Amritaprasam 2) Asvagandhadi lehyam 3) Satavari lehyam 4) Chavanprasad 5) Narasimha Rasayanam, 6) Aja Ashwagandha Rasayanam 7) Bhallataka Phalamajjadi Avaleha It helps to improve vigour and vitality. In addition, it is an excellent aphrodisiac too.

**Aristam:-** 1) Dasamularistam 2) Draksharistam 3) Asvagandharistam 4) Mritasanjeevani Arishtam, 5) Ashwagandharishtam 6) Dasamoolarishtam 7) Saraswatharishtam

Asvagandharishta is improves blood flow to the reproductive tissues, induce spermatogenesis. It is good for stress induced male infertility.

Mritasanjeevani Arishtam, Asvagandharishtam, Dasamoolarishtam and Saraswatharishtam are good aphrodisiacs and improve sexual health.

**Asavam:** Nalikerasavam contains many nutrients which can improve sexual health.

**Lehyam:** Narasimha Rasayanam, Aja Ashwagandha Rasayanam

**Sukra sodhana gana (drugs which help in purification of semen or sperm):-**

1) Kustha 2) Elavaluka 3) Katphala 4) Samudra Phena 5) Kadamba Niriyasa 6) Iksu 7) Kanda Iksu 8) Iksuraka 9) Vasuka 10) Usira.

**Sukra janana gana (drugs which help in formation of semen or sperm) :-** 1) Jivaka 2) Rsabhaka 3) Kakoli 4) Ksirakakoli 5) Mudgaparni 6) Masaparni 7) Meda 8) Vrksaruha 9) Jatila 10) Kulinga.

These should be given with milk as anupan or combined with a vajikarana diet that includes urad dal, milk, basmati rice, wheat, ghee, honey and for non-vegetarians, chicken soup and fish.

Grandhibhuta/Avasadi may be managed by ghee prepared out of Shati (*Hedychium spicatum* Ham. Ex. Smith) or Palasha kshara (alkali made from *Butea monosperma* [Linn.] Kuntze.)

**Rasa Kalpa (Herbo-Mineral Compound) which are very effective in Oligospermia**

Sr. No	Name of Rasa kalpa	Type	Ingredients	Dose & Anupan	Indications
1	Pushpadhanwa Ras	Kharaliy	Rasasindura, Nagbhasma Lohbhasma, Abhrakbhasma Vangabhasma Bhavana Dravya: Dhaturapatra Swaras, Bhanga Kwath, Yashtimadhu Kwath, Shalmali Swaras	120 mg, Honey,Ghee and Milk	Shishnashaithilya after ejaculation, Shukravahini Balkarak, Shaithilyanashak
2	Purnachandrodaya Rasa	Kharaliy	Rasasindura, Abhrakbhasma Lohbhasma, Shilajeet Vidang Churna Swarnamakshik Bhasma	120-250 mg Honey and Ghee	Rasayan,Vayasthapak Shukrakshay Premature Ejaculation Daurbalya, Napuskatva
3	Vangeshwar Rasa (Brihat Bhaishajya Ratnakar)12	Kharaliy	Shudha Parada- 10gm, Rajat Bhasma- 10gm Vanga Bhasma- 10gm Abhrakbhasma- 10gm	120-250 mg Honey and Milk	Rasayan,Vayasthapak Shukrakshay Premature Ejaculation

			Suvarna Bhasma- 3 mashe Moti Bhasma-3 mashe		Daurbalya, Napuskatva
4	Hemasundar Ras	Kharaliy	Rasasindur- 1 Part Suvarna Bhasma- ¼ part	120 to 180 Mg Milk, Butter,	Rasayan Vajikaran
5	Chandrodaymakardhwaj	Kharaliy	Suvarna Bhasma- 1 Masha Rasasindur- 2 Mashe Kasturi- 1 masha Jayphal-1 tola Lavang- 1tola Bhimseni kapur- 1 tola Marich - 1 Tola	240 mg	Vajeekar Balavardhak Veeryavardhak Agneevardhak
6	Manmathabhraras	Kharaliy	Gandhak, Abhrak Bhasma , Tamra bhasma, Loh bhasma, Vanga bhasma and other herbal drugs	250 mg with warm milk	Shukravardhak Balavardhak Vajikar
7	Maheshwar Ras	Kharaliy	Rasasindur,Gandhak, Loh Bhasma, Tamra Bhasma, Abhrak Bhasma, Suvarna Bhasma and other heble drugs	125mg with water	Ksheen Veerya, Balavardhak
8	Rasasindura	Kupipakva	Shudha Parad-1 Part Shudha Gandhak- 1part Bhavana- Vatankur Swarasa	120 mg Musali Churna, Shalmali Churna	Rasayan, Kamodeepak, Rativilasak, Balakanteeprad, Vajeekaran,
9	Sidha Makardhwaja	Kupipakva	Shudha Parad-1 Part Shudha Suvarna- 4 Part Shudha Gandhak- 8part	120 mg Musali Churna, Shalmali	Napuskatva,Rasayan, Kamodeepak, Rativilasak, Balakanteeprad, Vajeekaran

				Churna with honey	
10	Suvarnavanga	Kupipakva	Shudha Vanga+ Shudha Parad+ Amla dravya mardan+ Saindhav + Shudha Gandhak+ Navasadar	120 mg With honey	Napuskatva,Rasayan, Kamodeepak, Rativilasak, Balakanteprad, Vajeekaran
11	Rasaparpati	Parpati	Shudha Parad-1 Part Shudha Gandhak- 1part	120 -240mg Takra Dugdha Jal	Rasayana,Kamashukravardh ak, dourbalya, Shakteevardhak
12	Suvarna Parpati	Parpati	Shudha Parad-80 gm Shudha Suvarna – 10gm Shudha Gandhak- 80gm	120 to 360mg Takra Dugdha Jal	Rasayana,Kamashukravardh ak, dourbalya, Shakteevardha
13	Hemgarbha Pottali	Pottali	Rasasindura-3part Suvarna Bhasma- 1 part Tamra Bhasma- 1 part Gandhak-1part	15mg-120 mg Pippali and Honey	Rasayan,Vayasthapak Shukrakshay Premature Ejaculation Daurbalya
14	Retorodhan Pottali	Pottali	Akkalkara,Jaiphal,Jaipatri, Ela, Kasturi, Keshar, Hingu each 1part	15mg-120 mg	Rasayan,Vayasthapak Shukrakshay Premature Ejaculation Daurbalya
15	Vanga Bhasma	Bhasma	Shudha Vanga Shudha Parada	120-240mg Butter with Guduchi Satva	Rasayan Increases Vigour for sex, Prevents Nocturnal emission,

					Shukrakshay Premature Ejaculation Daurbalya
16	Trivanga Bhasma	Bhasma	Nagbhasma, Vanga Bhasma, Yashad Bhasma each in equal part Bhavana- Bhang and Ahifen	120-240mg Butter and Honey	Veeryavardhak Napuskatva, Rasayan, Kamodeepak, Rativilasak, Balakanteepad, Vajeekaran
17	Suvarna Bhasma	Bhasma	Shudha Suvarna Foils & Shudha Parada in equal amount + Nimbu Swaras Bhavana+ Shudha gandhak		Rasayan, Vayasthapak, Varnaprasadak, Phirang, Vajeekaran etc

The ingredients used in Rasakalpas are predominantly Rasyana drugs containing minerals which are well known for their antioxidant properties. They nourish all the dhatus and increases quantity and quality of Shukra Dhatu (Semen). Rasayna drugs provides Aayu, Kam, Bal, Varna etc. and make human more potent. This improves his psychological confidence and enhances vigour and Vitality which is essential for treating Male Infertility.

In vitro and in vivo studies reveals, many antioxidants possess a beneficial effect on fertility and therefore their use is recommended as supportive therapy for the treatment of infertility in men.

**Pathya - Apathya:** Pathya that is advised for him, then it will help him certainly to bring down the increased state of disease.

**Pathya:-** Patient should advice to take Vasa (Muscle Fat), Majja (Bone marrow), Ghrita (Ghee), Vilepi (Gruel), Kshira (Milk) and its products, Rakta Shali (Red variety of Rice) Godhuma Wheat), Masha (Vigna mungo), Kadali (Banana), Atasi (Linum usitatissimum), Patola Patra (Trichosanthes dioica), Kushmanda Majja (Benincasa hispida), Alabu Phala, (Cucurhita lagrenaria), Kharjura (Phoenix sylvestre), Varahi Mamsa (swine meat), Mahisha Mamsa (Buffalo meat), Kukkuta mamsa (Chicken), Narikela Ksheera (Coconut Milk), Mandaka (Supernated part of buttermilk), Karpoora Nalika, Rasala, Sharkara Uudakam, Yava Saktavaha, Jirna, Madya (Old wine), Mahisha Dadhi (Curd prepared from Buffalo milk), Mathitha Takra (Churned Buttermilk), Navaneeta (Butter), Gavya Ghrita (Cow ghee), Mahisha, Ghrita (buffalo ghee), Eranda Taila (Castor oil), Madhu (Honey) 360, Purana Guda (Old jaggery). Patients should also advice to do

Abhyanga, Anjana, Udvartana, Sheka, Abharana Dharana, Gandarva KanyaShravana, Chandrama Yukta Ratri, Navayauvana Stree, Snana, Pada Prakshalana.

**Apathya:** Patients ask to avoid Katu, Tikta, Lavana (Pungent, Bitter, Salt) Rasa, Atisevana, Nishpava (Lablab purpureus), Chanaka (Cicer arietinum), Kulattha (Dolichos biflorus), Kshara Atisevana, in routine diet) Patient should ask to avoid. Adhika Vyavaya, Adhika Shoka, Adhika Chinta, Bhaya, Vega Dharana in routine life style.

**DISCUSSION & CONCLUSION:** - Infertility is a burning problem of society mainly male infertility, if we have proper knowledge of cause, diagnostic tools for early diagnosis and have proper management can cure the patient and couple can achieve parenthood. Ayurveda is better choice for the infertile patients,

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