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Management of Oligospermia (*Ksheena Shukra)* through *Ayurveda*: A Case Study

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ABSTRACT:

As per today's lifestyle, stress and sedentary work habits are being the biggest cause for infertility. The objective of the case study is to use *Panchkarma* procedure to increase the sperm count for a healthy progeny. A 29 year old married man visited the OPD of department of *Panchakarma* of Sidramppa Danigond Memorial Trust"s *Ayurvedic* Medical College Terdal on 19-09-2020. He had complained of decreased sexual interest and generalized weakness also. It is pathological condition of *Shukra* in which there may be reduced sperm count. In classics many *Shukra Janaka* drugs are explained in *Ksheena Shukra* condition. The patient was treated using *Basti Karma* and supportive *Ayurvedic* therapy for *Ksheena Shukra*. This case was managed with *Anuvasan basti* for 10 days and then the patient was administered *Shaman Chikitsa* for 30 days. The detail of this case highlights the role of *Shodhana* and *Shamana Chikitsa* in the management of Oligospermia.

Keywords – *Anuvasan basti*, Oligospermia, *Ksheena Shukra*, Male infertility

INTRODUCTION

A seed germinates into the seedling; just like that the *Shukra* is the root of the progeny. Just like *Ghee* resides in the milk or *Guda* in sugarcane, similarly *Shukra* resides throughout the body. *Shukra* being the one of the root cause of progeny, utmost care should be given to protect it from any aliments that affects the development of progeny. Oligospermia and **low sperm count** refer to semen with a low concentration of sperm[1] and is a common finding in male infertility. Often semen with a decreased sperm concentration may also show significant abnormalities in sperm morphology and motility. Usually as the sperm count decreases there is corresponding decrease in chances of conception. Low sperm count is termed as the oligospermia which according to WHO is less than 15 million sperm/ml, consistent with the 5th percentile for fertile men.[2] Oligospermia can be classified as-[3]

1. Mild: concentrations 10 million – 15 million sperm/mL
2. Moderate: concentrations 5 million – 10 million sperm/mL
3. Severe: concentrations less than 5 million sperm/mL

In *Ayurveda, Aacharyas* explained that the function of *Shukra Dhatu* is reproduction. *Shukra* is formed from the *Majja Dhatu*, hence *Shukra* is the essence of *Majja Dhatu*. In classics, there are eight types of *Shukra dushti* explained in which *Ksheena Shukra Dushti* is one among all eight. *Ksheena Shukra* is a *Vataja Vyadhi,* manifested as a result of *Shukravaha Srotodusti*. Prevalence in *Madhyama Vayas* being a disease from *Apana Vayu* province, in which decreased quality and quantity of *Shukra Dhatu* is observed.The cause of infertility as explained in classics are due to defects in *Beejansha* (sperm and ovum), *Aahar, Vihara, Vichara* and *Bala*. Systemic symptoms like *Shrama, Dourbalya, Angamarda, Panduta, Sadana* and delayed and blood tinged ejaculation are associated *Ksheena Shukra* [4,5] *Ayurveda* describes potent drugs and efficient therapeutic procedures mentioned in *Vajikarana* to treat the *Ksheena Shukra* and Infertility. *Ayurvedic* treatment through *Shodhana* and *Shaman*a that possesses *Vrishya* effect helps increasing the production of spermatozoa which ultimately causes increase in sperm count is useful for combating the *Ksheena shukra*.

In the present case study, a patient suffering from Oligospermia has been treated with *Anuvasan Basti(Eranda taila+ Saindhava Lavana)* for 10 days and then administration of *Shaman* drugs like *Shatavari (Asparagus racemosus)*, *Ashwagandha* (*Withania somnifera* (Linn.) Dunal), *Kapikachu Churna* (*Mucuna pruriens* (L.) DC.), *Musli churna* (Chlorophytum borivilianum)and herbomineral preparations, that is, *Arogyavardhani Vati,* and *Phalakalyanaka* Ghrita.

CASE REPORT

A 33 year old married man visited the OPD of department of *Panchakarma* in Padma Hospital and Research centre, Terdal on 19-06-2021. His main complaint was trying to have a baby.

Associated Complaint: generalized weakness and un-interested in sexual life.

Disease History: The patient had 5 years of his married life and active–normal coital act without any contraceptive use, unable to conceive her partner since 3 years. The patient's wife was completely normal at the endocrinological and clinical examination. She had failed to conceive in spite of unprotected frequent intercourse even during the 12 to 18th day of menstruation since the last 3 years. The patient had habit of smoking since 7 years and was also a habit of taking alcohol daily. On inquiry, the patient was having extra salt in diet with oily, spicy food. By occupation, patient was working IT sector in shifting duty and having stressful work, long duty Hours.

Past history: N/K/C/O DM/ HTN / Thyroid dysfunction.

Family history: Mother is K/C/O Hypertension

Personal history:

Diet – Mixed
Appetite – Good
Bowel – 1-2times/ day
Maturation – 3 to 4 times / day 1 time / night
Sleep – Disturbed sleep

Medical/ Surgical History: Nothing Specific

Dasha vidha pareeksha

Prakruti – Vata-Pitta
Vikruti – Vata -kapha
Sara – Madhyama
Samhanana – Madhyama
Pramana – Dhairgya- 163 *cms*
Dehabhara –79 *kg*
Satmya – Madhyama
Satva - Madhyama
Ahara shakti – Abhyavarana shakti – Madhyama
Jarana shakti – Madhyama
Vyayama shakti – Madhyama
Vaya – Youvana

General examination

Built – Moderate
Nourishment – Moderate
Temperature – 98.2 F
Respiratory rate – 20/min
Pulse rate – 82 bmp
Blood pressure – 130/90 mmHg
Height – 163cms
Weight – 79 kg
Tongue – Uncoated

Systemic examination

CVS : S_1 and S_2 heard
CNS : Conscious and well oriented with date, time and place.
RS : Normal vesicular breathing, no added sounds.
P/ A : Soft, Non tender

Investigations

CBC – Hb% - 13.2gm%

ESR – 14mm
VDRL- Non-reactive
HBsAg- Non-reactive
HIV- Non-reactive
HCV- Non-reactive
Semen Analysis on 15/06/2021(3days Abstinence):
Volume- 3ml
pH- 7
Specific gravity- 1.027
Viscosity- -4
Total sperm no. 14million/ejaculation
Percent Motility- 40% normal
Forward Progression- 3
Normal Morphology- 50%
Sperm agglutination- 4
RBS- no
Liquefaction- n
Fructose Level – N
Investigations of Wife-
USG of the pelvis – Uterus is normal in size and shape. B/L ovaries – Normal
Ovulation +
No infection
Diagnosis- *Shukra Kshaya* (Oligo- spermia)

Intervention : from 19/06/2021
Table – 1 Patient follow up, Treatment and observation

Poorva Karma- *Sarvanga Abhyanga* using *tila taila* and *swedana*
Shodhana Karma: *Anuvasana Basti- Eranda Taila+Saindhava Lavana*
Dose: 120ml
Duration: 10 *Anuvasana Basti*
Time for administration- *Trishanmatra*(18-22seconds)

Samshaman Karma: (for 30 days)

1. *Arogyavardhini Vati* 2-0-2
2. *Ashwagandha + Musali churna + Shatavari + Kapikachhu* in equal ratio 6grams BD with warm milk
3. *Phalkalyan Ghrita* 10ml BD with lukewarm water anupana before meal
4. Tab. Speman 1 BD

Table 1 Shows *Samshaman Karma*
Pathya Sevan- Diet: Milk, Sugarcane Juice, *Ghee*, etc..
Vihar- Sound sleep for atleast 6-8hours,
Yoga- Surya Namaskara, Dhanurasan, Paschimottanasan, etc.
Apathya- *Madyapana, Dhumrapana, Ratri jagran, Maithuna* for 1-2months

DISCUSSION

Generally, in Oligospermia the sperm count as well as its motility is found to be low. Treatment of oligospermia should be aimed at increasing the sperm count as well as their motility. *Shukradusti* is the causative factor for the infertility. *Ksheenashukra* is a type of *Shukradusti* which can be correlated to oligospermia. The treatment of *Ksheenashukra* mainly aims at *Shukrajanaka* and *Shukrapravartaka* in-terms of increasing the sperm count and motility by using *Vajeekarana Dravya*
Anuvasana Basti- Eranda+ Lavana has been attributed with *Madhura-katu-kashaya rasa*, *Madhura Vipaka and Ushna Virya*; has *Guru, Snigdha, Tikshana* and *Sukshma Gunas*. It pacifies *Kapha-Vata Doshas* they help to regulate the vitiated *Vata* and correct its *Prakrit Gati* and *Karma* It provides good results on *Ksheena Shukra* both qualitatively and quantitatively. *Lavana* has *Anushna Virya* and pacifies vata.
Aarogyavardhini vati Ingredients- *Abhraka, Amla, Harad, Baheda, Shilajit, Kutaki.* It helps to improve overall health of a person. It is commonly known as *Sarvaroga Prashmani* which signifies a proper treatment for all kinds of ailments. It balances *Tri doshas.* It has *Deepana* and *Pachana* properties which improves digestion and improves metabolism and also because of its *Shodhana* property helps in detoxification.
Ashwagandha
It is known to provide aid in managing problems associated with stress and anxiety due to its *Rasayana* (Rejuvenating) and *Vata* balancing properties.
Including *Ashwagandha* in daily routine helps to boosts up the natural energy of a person and relieves from stress & fatigue.
It also improves sexual health by reducing oxidative stress and regulates the hormones.
Vajikarana (aphrodisiac) property which helps in improving stamina and treats conditions like male infertility.
Musali Churna
Shweta Musali Churna is a good aphrodisiac which helps in improving sexual performance and boosts body immunity.
It is commonly used in treating impotence, it increases the sperm count and increases libido.
Shatavari

It is used in males to treat sexual debility. Enhance spermatogenesis by improving testosterone levels in men affected by oligospermia (semen with a low concentration of sperm). It may further improve the sperm count and the quality of semen. It may help in the management of sexual performance by improving sexual desire and sustaining penile erection.

Kapikachchu

Cowhage/Velvet Bean *(Kapikachchu)* is an aphrodisiac, which supports the production of hormones associated with the 'pleasure system' of the brain.

It basically helps in increasing testosterone and dopamine level also helps in lowering stress, solves reproductive problems.

PhalkalyanaGhrita

Ingredients- *Ashwagandha, Hing, Triphala, Haridra, Kustha, Kutki, Shatavri, Bala, Munakka, Rakta chandana, Kshir vidari, Gaudugdha, Meda, Daru Hadridra, Neel Kamal, Shwet Chandan, Ghrita, Kshir Kakoli. Phalakalyana Ghrita* has ushna virya property and it has been indicated in the management of *Shukra Dosha* and has been attributed as *Ayushyam, Paushtika,* and *Pusanvana Karma*. Also, a clinical trial especially effects of *Phala Ghrita* in the management of Oligozoopsrmia has been done with significant results.

CONCLUSION

To conclude, this study showed that treatment based on Ayurveda principles was found to be effective in male infertility patients with idiopathic Oligospermia in improving sperm count and sperm motility. It can be a field of research and recommend larger and more rigorous studies such as randomized control trials to get more conclusive results. *Vajikarana* or *Vrishya Chikitsa* is one of eight major specialties of the Ashtanga Ayurveda. Ayurveda remedies can be helpful for infertile patients to achieve healthy progeny.

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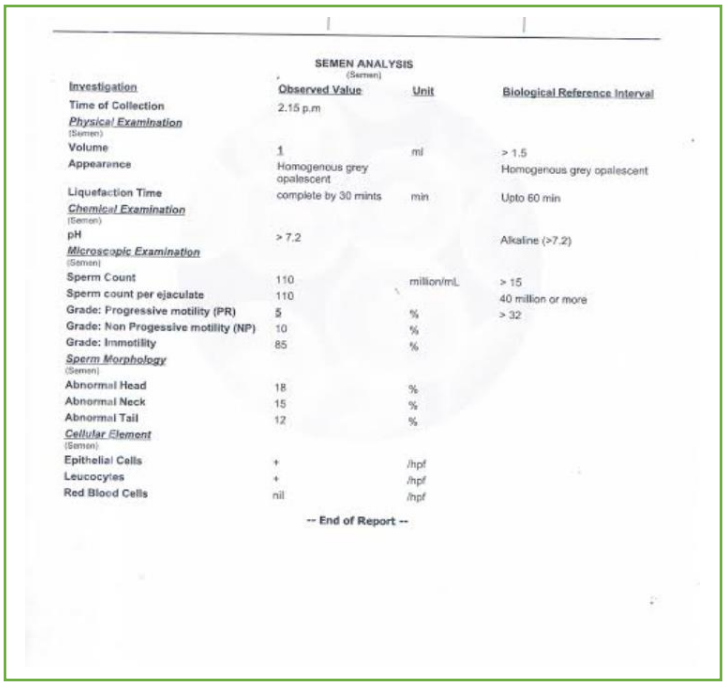
Table 1 Shows *Samshaman Karma*

Date of Follow up	Treatment given	Observation
19/06/2021	*Arogyavardhini Vati* 2-0-2 *Ashwagandha + Musali churna + Shatavari + Kapikachhu* in equal ratio 6grams BD with warm milk *Phalkalyan ghrita* 10ml BD with lukewarm water *Anupana* before meal Tab. Speman 1 BD Advised for intercourse during wife's ovulatory phase	Patient reported good energy level Less lethargic Feels active during working hours too Repeat Semen Analysis – Volume- 4ml Sperm count- 19million/ejaculation
18/07/ 2021	*Arogyavardhini Vati* 2-0-2 *Ashwagandha + Musali churna + Shatavari + Kapikachhu* in equal ratio 6grams BD with warm milk *Phalkalyan ghrita* 10ml BD with lukewarm water anupana before meal Tab. Speman 1 BD Advised for intercourse during wife's ovulatory phase	Repeat Semen Analysis- Volume- 4ml Sperm count- 23million/ejaculation
27 / 08/2021	-	Conceived

Fig 1-Investigation reports of patient.



SEMEN ANALYSIS

Investigation	Observed Value	Unit	Biological Reference Interval
Time of Collection	2.15 p.m		
Physical Examination (Semen)			
Volume	1	ml	> 1.5
Appearance	Homogenous grey opalescent		Homogenous grey opalescent
Liquefaction Time	complete by 30 mints	min	Upto 60 min
Chemical Examination (Semen)			
pH	> 7.2		Alkaline (>7.2)
Microscopic Examination (Semen)			
Sperm Count	110	million/mL	> 15
Sperm count per ejaculate	110		40 million or more
Grade: Progressive motility (PR)	5	%	> 32
Grade: Non Progessive motility (NP)	10	%	
Grade: Immotility	85	%	
Sperm Morphology (Semen)			
Abnormal Head	18	%	
Abnormal Neck	15	%	
Abnormal Tail	12	%	
Cellular Element (Semen)			
Epithelial Cells	+	/hpf	
Leucocytes	+	/hpf	
Red Blood Cells	nil	/hpf	

-- End of Report --

Urine Routine

Investigation	Result	Unit	Bio. Ref. Range
Sample Type : URINE			
Quantity	30 ml		
Colour	Pale Yellow		
Appearance	Clear		
pH	7.0		4.6-8.0
Specific Gravity	1.005		1.003-1.035
Albumin	Absent		
Sugar	Absent		
Ketone Bodies	Absent		
Nitrite	Absent		
Blood	Absent		
Bile Salts	Absent		
Bile Pigments	Absent		
Urobilinogen	Absent		
Epithelial Cells	Occasional		
Pus Cells	2-3	cells/hpf	0-5 cells/hpf
Red Blood Cells	Absent		
Casts	Absent		
Crystals	Absent		
Amorphous Materials	Absent		
Bacteria	Absent		
Yeast Cells	Absent		
Trichomonas Vaginalis	Absent		
Mucus	Absent		

METHOD: Chemical Examination is done by Strip Method

Page 1 of 1 ---------- END OF REPORT ----------