

A CLINICAL TRIAL OF ARDHAMATRIK BASTI IN SHUKRAKSHAYA W.S.R TO OLIGOSPERMIA

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ABSTRACT

Reproduction is the basis phenomenon by which every creature on this planet produces their progeny similarly humans too reproduce their new generations. It is only possible when there is healthy and adequate amount of sperms and ova. Due to modernization a very serious disease called oligospermia (*shukrakshaya*) is spreading very fast in which the sperm count decreases and human beings face problems in reproduction process. In Allopath there is no specific treatment for oligospermia that's why we stressed on looking into alternative systems especially *Ayurveda* and find out solution to improve Sperm Count, Motility and Volume simultaneously. So *Ardhamatrik basti* described in *Chakardatta niruhadhikara* were given to 30 patients of *sukrakshya* (oligospermia) for 30 days and results were noted after 2 months of *basti karma*. There were significant improvement in subjective as well as objective parameters i.e; 48.46% improves in *ksheen shukra lakshanas*, 31.13%, 23.09%, 35.38%, 43.41%, **38.16%** and 24.14% improvement in libido, Erection, Orgasm, Ejaculation, **Sperm Count** and motility respectively.

Key words: Oligospermia, *Ardhamatrik basti*, *Shukraskhaya*, *Sperm*

INTRODUCTION

In our society always female is thought to be responsible for infertility. Thanks, to the medical statistics that have held the males equally responsible in at least 50% cases either alone or in association with the female. W.H.O. estimates reveal a gradual increase of infertility by 16.71% (W.H.O.1976).¹ Oligospermia i.e. lack of

sperm quantity is the most common problem responsible for infertility in males. Oligospermia is defined as less number of sperm in the ejaculate of the male or less than 20 million sperms per milliliter. Normal Sperm count: 20 million / milliliter to 120 million / milliliter. Sperm count below 20 million/ml called Oligospermia In ayurveda oligos-

permia is defined as *shukrakshaya* (*Ksheenshukra*) and a lots of *vajikarana* drugs have been mentioned for its treatment even in *panchkarma* therapy acharya charaka, sushruta and chakradutta etc have mentioned lots of *vrishya basti* to improve quantity & quality of *shukra dhatu*. Ayurvedic classics have mentioned that, the function of *Shukra Dhaatu* is reproduction. There are eight types of *Shukradushti* according to classics². A person having *Shukradushti* is unable to fulfill his *Chaturvidha Purusharth*. *Ksheena Shukra* is one type of *Shukradushti*. It is *Vata Pittaja Vyadhi*, manifested as a result of *Shukravaha Srotodusti* and *apaan vayu vikriti*. According to Ayurveda, "The condition in which Shukra will be Alpa is termed as *Ksheena Shukra*". This can be interpreted as reduction in the sperm count or quantity of sperm.

Vishishta Nidana of Ksheena Shukra.

- *Ativyavaya and Ativyayaama.*
- *Asaatmya Ahara sevana*
- *Akaala Maithuna*
- *Ayoni Maithuna*
- *Amaithuna*
- Intake of food which is having more *Tikta, Kashaaya, Lavana* and *Amla Rasas, Rooksha Guna* and *Ushna Veerya.*
- Excessive *Chinta* (thinking) and *Shoka* (Sadness)
- *Atiyoga* of *Shastra, Kshara* and *Agni Karma.*
- *Bhaya* (Fear), *Krodha* (Anger) and *Abhichara Karma* (black magic).
- *Vegadharana*

- *Kshata*

Sampraapti Ghatak

Dosha: *Vata, Pitta*

Dhaatu: *Rasa, Majja, Shukra*

Srotas: *Rasavaha, Majjavaha, Shukravaha*

Agni: *Pachakaagni, Bhutaagni and Dhatwaagni*

Srotodushti: *Sanga*

Udbhavasthaana: *Amaashaya, Pakvaashaya*

Adhishtaana: *Sarvashareera, Vrishana*

Vyakt Sthaana: *Shukra, Vrishana, Medra*

Vyadhiswabhaava: *Chirakari*

Rogamaarga: *Madhyama Rogamaarga*

DRUG REVIEW:

ARDHAMATRIK BASTI³:

INGREDIENTS: *Dasmool kwath, Saunf churna, Saindhav, Shahad, Madanphal*

Importance of Ardhamatrik Basti:-

The importance of *Ardhamatrik Basti* are as follows:-

No restriction of *Snehan, Swedan & Aahar.*

No need to follow strict *pathaya-apathya*

Specially it is mentioned in *Yakshma, Shoola, Krimi-roga & Vatarakta.*

It improves the quality and quantity of *Shukra.*

It improves the *Bala & Varna.*

Uttama Punsavan Factor.

Probable mode of action of Basti

According to *Ayurveda basti* administered through anal route provides nourishment to whole body as water given in roots of a tree provides nourishment to whole plant⁴. *Basti* eliminates the vitiated *dosha* from the rectal route.⁵ Medicines which are administered through rectal route are absorbed in rectum

and large intestine. The rectum has rich blood and lymph supply and drugs can cross through the rectal mucosa like other lipid membrane. According the *Ayurveda* the virya of the ingredients used in the *Basti* gets absorbed and then through general circulation reaches at the sites of the action and relieves the disease. That's why Acharya sushruta has mentioned that, by using the different ingredients, *Basti* can cure *Pittaja*, *Kaphaja*, *Raktaja*, *Sansargaja* and *Sannipatika* disorders, though it is the best treatment for *Vata dosha*. *Dwarakanath* suggested that *Basti* therapy by virtues of its medicaments greatly influences the normal bacterial flora of the colon. By doing so it modulates the rate of endogenous synthesis of Vit. B12. This vitamin B12 may have a role to play in the maintenance or regeneration of nerves. According to him it was one of the possible mechanisms through which *Basti* could help in *vatika* or Neurological diseases. *Basti* has its effect on two important factors Viz. *Vata* and *Agni*. Both are responsible for proper formation of *Dhatu*.

Action of Basti on different Sukra Dhatu - *Pakvashaya* is the main seat of *Apana vayu* which performs the function of *sukra pravartana*. By controlling *Apana vayu*, *Basti* shows its effect on *shukra dhatu*. Hence

Basti containing *Vajikarana dravya* is mentioned for *Vajikarana* purpose.

SPERMATOGENESIS:

It is the process of production of sperm by stimulation of interior pituitary gonadotropic hormones.

PHASES OF SPERMATOGENESIS:

1. Spermatocytogenesis.
2. Meiosis
3. Spermatogenesis.

HORMONAL FACTORS THAT STIMULATES

SPERMATOGENESIS:

- Testosterone hormone secreted leydig cells located in the interstitial of the testis is essential for growth and division of the germinal cell in forming sperm.
- Luteinizing hormone secreted from anterior pituitary gland stimulates the leydig cells to secrete testosterone.
- Follicle stimulating hormone secreted from anterior pituitary stimulates sertoli cells for conversion of spermatides to sperm.
- Estrogen come from leydig cells helps in spermatogenesis.
- Growth hormone promotes early division of the spermatogonia.

Table 1: Comparison of Oligospermia and *Ksheena Shukra*

Modern view	Ayurvedic view
Addictions	<i>Nitya Madhya Sevana</i>
Strenuous riding	<i>Shigrayana – Gajaadi Patanaat</i>
Genetic defects	<i>Beeja Dushti</i>
Trauma	<i>Kshata</i>
Hydrocele, Mumps, Malaria, Other	<i>Anya Vyadhi Karshita</i>

infections, Systemic diseases, Neoplasm Vas deferens and ejaculatory duct obstruction Sexual Causes Iatrogenic cause Psychological causes Thermal causes	<i>Shukravaha Srotorodha</i> <i>Nitya Stree Seva</i> <i>Atiyoga of Shastra, Kshaara and Agni karma</i> <i>Chinta, Shoka, Bhaya, Krodha</i> <i>Pitta Prakopaka Hetu</i>
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Types of Oligospermia

There is no exact classification regarding the types of Oligospermia but based on the causative factors it can be classified as follows.

1. Oligospermia due to Pre-testicular causes
2. Oligospermia due to Testicular causes
3. Oligospermia due to Post-testicular causes
4. Idiopathic Oligospermia
5. Traumatic Oligospermia

BASIC TREATMENT OF OLIGOSPERMIA ACCORDING TO MODERN SCIENCE:

1. Pharmacological
2. Surgical
3. Other Procedures a. IUI b.IVF c. ICSI

MATERIAL AND METHOD

30 patients having oligospermia were selected from OPD and IPD of SBMN Ayurvedic College Hospital, *Asthal Bohar* and *ARDHAMATRIK BASTI* were given for 30 days in *karma basti karm*

Collection of semen for Analysis

Abstinence: Before collection of the ejaculate minimum of 3 days and maximum of 5 days abstinence was followed.

Method: Masturbation.

Container: The Laboratory supplied a dried and wide mounted bottle was used.

Place: A private room adjacent to the laboratory was used for semen collection

Time Semen collection time was restricted between 9.30 am to 11.30 am

INCLUSION CRITERIA:

- Patients coming with chief complaint of infertility due to oligospermia.
- Patients in age group of 25 to 45 years
- Patient's detected sperm count less than 20 million per ml.

EXCLUSION CRITERIA:

- Patients below 25 and above 45 years of age.
- 2 Patients under clinical surveillance for thyroid disease/having known pituitary /adrenal disease.
- Patients known to have Azoospermia.
- Patients taking insulin or oral hypoglycemic drugs.
- Patients taking certain drug that effects serum concentration of T.S.H or free thyroxin.
- Patients having multi endocrine neoplasm.
- Patients having congenital hypothyroidism.
- Patients having post surgical hypothyroidism.

CRITERIA FOR WITHDRAWAL

- During the course of trial if any serious condition or any serious adverse effects which requires urgent treatment.
- Subjects himself wants to withdraw from the clinical trial.

LABORATORY INVESTIGATIONS

- Semen examination
- Any other examination if needed eg. HIV, VDRL etc.

CRITERIA OF ASSESSMENT:

Assessment response:

The improvements of patients were assessed on the basis of relief in Subjective and objective parameters. According to severity, the grading for the parameters was given as below;

GRADING FOR SUBJECTIVE PARAMETER

1. Grading for Symptoms of *Ksheena Shukra*

- a) Normal (No Symptoms) – 0
- b) Mild – 1
- c) Moderate – 2
- d) Severe – 3

2. Desire

- a) Normal (Desire without any initiation from the partner) – 0
- b) Mild (Desire after the involvement of the partner) – 1
- c) Moderate (Desire after the involvement of the partner and can't maintain the desire further) – 2
- d) Severe (Lack of desire) – 3

3. Erection

- a) Normal (Maintain the erection till the end of the act) – 0
- b) Mild (unable to maintain erection during the act) – 1
- c) Moderate (Failure to do the insertion even though having erection) – 2
- d) Severe (No erection) – 3

4. Ejaculation

- a) Normal (Without any type of discomfort) – 0
- b) Mild (Pain and burning after ejaculation) – 1
- c) Moderate (Less ejaculation at the end of the act) – 2
- d) Severe (No ejaculation or blood mixed less ejaculate – 3 or premature ejaculation)

5. Orgasm

- a) Normal (Orgasm attains at the end of the act with full satisfaction) – 0
- b) Mild (Attains orgasm just before the completion of the act) – 1
- c) Moderate (Attains the orgasm in the middle of the act) – 2
- d) Severe (Lack of orgasm) – 3

GRADING FOR OBJECTIVE PARAMETER

1. Sperm count

- a) Normal (20 million / ml or more) – 0
- b) Mild (>14 – <20 million / ml) – 1
- c) Moderate (7 – 14 million / ml) – 2
- d) Severe (>0 – 7 million / ml) – 3

2. Sperm motility

- a) Normal (motility above 75 %) – 0
- b) Mild (motility - 50% - 75%) – 1
- c) Moderate (motility - 25% - 50%) – 2
- d) Severe (motility - Below 25%) – 3

STATISTICAL ANALYSIS: Descriptive data that included Mean, Standard Deviation (S.D), Standard Error (S.E), t value and p value were calculated for all the

variables in trial group. Post treatment changes were assessed by paired “t” test.

EFFECT ON THE SUBJECTIVE PARAMETERS

Table 2: Effect on *Sarvadaihika Lakshana*

Lakshansa	BT		AT	
	mean	percentage	mean	percentage
<i>Daurbalya</i>	12	80%	9	60%
<i>Mukhasosha</i>	9	60%	5	33.3%
<i>Pandutwa</i>	6	40%	3	20%
<i>Sadana</i>	12	80%	10	66.6%
<i>Shrma</i>	12	80%	9	60%
<i>Angamarda</i>	14	93.3%	5	33.3%
<i>Timiradarshana</i>	6	40%	3	20%

Administration of basti, the *Pratyatma Lakshana* was found to be decreasing in number of patients. *Daurbalya* decreased from 80% to 60%. *Mukhasosha* was decreased from 60% to 33.3%. *Pandutwa* also decreased from 40% to 20% in the patients. *Sadana* decreased from 80% to 66.6% in the patients after the treatment. *Shrma* decreased from 80% to 60% in the patients. *Angamarda* and *Timiradarshana* also found to be decreasing from 93.3% to 33.3% and 40% to 20% in the patients respectively.

TABLE 3: Showing Results On The *Lakshana Of Ksheena Shukra* Based On Grading By Considering The *Sarvadaihika Lakshana* And Severity Symptoms.

Parameters	BT	AT	DIFF	%IMP	SD	SE	t	P	S
KSL	2.60	1.33	1.26	48.4	0.79	0.20	6.14	0.0001	HS
DESIRE	1.06	0.73	0.33	31.13	0.48	0.12	2.64	0.019	S
E RECTION	0.86	0.66	0.20	23.09	0.41	0.10	1.87	0.08	NS
EJECULATION	0.46	0.26	0.20	43.47	0.41	0.10	1.80	0.08	NS
ORGASM	1.33	0.86	0.46	35.38	0.51	0.13	3.5	0.003	HS
SPERM COUNT	2.13	0.15	0.60	28.16	0.50	0.13	4.5	0.004	HS
SPERM MOTILITY	1.93	1.46	0.46	24.14	0.51	0.13	3.5	0.003	Hs

- Improvement in *Ksheen Shukra Lakshana* is 48.46% and the P value was significant at the level of 0.0001. Improvement in desire after 90 days of treatment is 31.13% with P value 0.019. In erection improvement is 23.09% with P value 0.08.
- Improvement in ejaculation after 90 days of treatment is 43.47% with P value 0.08. Improvement in orgasm after treatment is 35.38% with P value 0.003.
- Improvement in sperm count after 90 days of treatment is 28.16% with P value 0.004.

- Improvement in sperm motility after 90 days of treatment is 24.14% with P value 0.003.

CONCLUSION

Infertility is one of the big challenges gifted by today's hectic life style and modernization. And one of the main causes of infertility is oligospermia. Due to fatal side effects and limitations Allopathic medicines are not able to successfully treat oligospermia. In this condition *Ayurveda* and its therapies are being proving like a boon. One of those therapies is *Ardhamatrik Basti* described by *Aacharya Chakardatta* in *Niruhadhikara* for oligospermia. After analyzing the results of these basti on patients in current trial we can satisfactorily say that *Ardhamatrik basti* on proper application increases sperm count and reduced the *ksheen shukra lakshana*

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