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Efficacy of *Shrungatak Modak* and *Jatifal Oil* in *Ksheenshukrata* w.s.r. to Oligospermia - A Single Case Study

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ABSTRACT

Infertility is defined as the failure of a couple to achieve a pregnancy with regular unprotected sexual intercourse after 12 months or more. A recent study status on Infertility states that, 50% is related to reproductive anomalies or disorders in the male, in which 90% of male infertility problems are related to Oligospermia and other abnormalities in semen analysis. However, there are number of treatments like hormonal therapies, intrauterine Insemination and test tube baby. Available but it is cost effective and not surety is there. That is the reason today to explore *Ayurveda* are mediator to treat this type of condition. As per *Ayurveda*, Oligospermia can be considered as *Ksheenashukra*. In *Ksheenashukra* there is diminished level of *Shukra* in the infertile couples. In *Aurvedic* texts many herbal preparations mentioned in management of *Ksheenashukra*. Here a Single case were taken to evaluate the effectiveness of *Shrungatak Modak* to treat a *Ksheenashukra*.

Key words: *Shukrakshya*, *Ksheenshukra*, *Oligospermia*, *Shrungatak Modak*

INTRODUCTION

Infertility is the failure to conceive more than 12 months with regular unprotected intercourse.^[1] Infertility is problem of global proportion affecting an average of 8%-12% of couples worldwide.^[2] Parenthood is one of the most desired goals of every couple. A sexual health is also as important as good physical health as well mental health. We should never feel shy to share our sexual problems. Sometimes

these problems may ruin self and social life. There is nothing bad to talk about these problems and relationships because these complications can become the reason of frictions in married couples.

According to *Ayurveda*, anatomical and physiological variation in *Shukra Dhatu* leads to infertility there is no direct correlation of oligospermia but we can correlate it with *Ksheen Shukra*.^[3] There are various herbs and natural compounds in *Ayurveda* which are quite beneficial to treat this problem. In this case we use combination of *Shrungatak Churna* with *Mishree* along with *Jatifal Tail Uttarbasti* as well as lifestyle modification were added. As *Apana Vayu* is responsible for proper expulsion of *Shukra*, so medicines are given at *Apanakala*.^[4] *Shrungatak* churn orally said to be *Vrishya*, hence can be considered as one of the ideal treatments for *Shukradosha*.^[5] It shows significant improvement in sperm count and motility.

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OBJECTIVES

1. To evaluate effect of *Shrungatak Churna* on *Ksheenashukra* (Oligospermia).

- To evaluate effect of *Jatiphal* oil *Uttarbasti* on *Ksheenashukra* (Oligospermia).

MATERIALS & METHODS

Type of study - It was a single case study

Inclusive criteria

- Willing for conception
- Oligospermia more than 10 million count
- Asthenospermia

Exclusive criteria

- Azoospermia
- Oligospermia less than 10 million count
- Any venereal disease - VDRL positive, HIV positive, HbsAg
- Endocrine disorder

Drug used - *Shrungatak Modak*

Dose - 1 Modak (2gm) BD

Route of administration of drug - Orally

Time - Daily BD for 25 days in a month

Duration - For 1 month

Jatiphal oil - *Uttarbasti*

Dose - 10 ml for 3 continuous days and repeat after 25 days

Route of administration of drug - *Uttarbasti*

Duration - For 1 month

Follow-up of patients - On every 25th day of month for 1 month have been taken.

CASE REPORT

A 26-year-old male patient belong to lower middle class of the society from urban area Nashik came to SSAM & H Streeroga OPD with complaint of unable to conceive his partner since 5 years of his married life. After taking full history, the patient was advised to

investigate for semen analysis. Once report came with 2million/ml sperm count, patient was asked to report for 3 times after 3 days of coital act Absence. After the investigation and proper history, patient was diagnosed with *Ksheenashukra* (Oligospermia) [Table 1.] The patient was treated with *Uttarbasti* for 1 month with *Jatiphal* tail along with *Shrungatak Modak*. After that patient was investigated again for Semen Analysis and was kept under observation with advice of *Pathya-Apathya* (diet lifestyle modification) for further period.

Chief Complaints

The patient had 5 years of his married life and active normal coital act without any contraceptive use, unable to conceive her partner since 4 years. The patient's wife was completely normal at endocrinology and clinical examination. She had failed to conceive inspite of unprotected frequent intercourse even during the 12th to 18th day of menstruation since last 4 yrs. The patient had habit of smoking since last 5 years and also a habit of taking alcohol weekly. By occupation patient was working as sales manager in shifting duty. The patient had not any past medical history of mumps, gonadal trauma, orchitis, hydrocele, tuberculosis, or history of any other long term attenuating diseases, or deathly illness. He did not have any history of previous surgical procedures like vasectomy reconstruction, herniorrhaphy and no history of taking any gonadotoxic agent. No other parameters except sperm count was altered within the male patient. The patient was advised analysis of semen after proper abstinence of 3 days. Before starting the medicine, the semen examination report revealed 45 million/ml sperm count. Smear showed 3-4 pus cells, 1-2 HPFE epithelial cells, no RBC cells.

General Examination

On examination of patient, pallor was absent; tongue was clear, and vegetarian in diet style. The patient appetite was good and usually prefers a salty and spicy diet, also bowel habits were irregular with complain of constipation. Patient had disturbed sleep and frequency of micturition was 6-7 times in day and 1-2 times in night time.

Table 1: Timeline events

Duration	Particular and interventions
March 2018	Married
March 2018-2023	Unable to conceive the partner
February 2023	Repetitive clinical and endocrinological examination of wife was done and found normal.
February 2023	First visit in SSAM & Hospital Streerog OPD
2 March 2023	Investigate for semen analysis and report came with 45million/ml sperm count.
3 March 2023	Treatment starts with <i>Ampachan</i> , <i>Ampachak Vati</i> 2 tab (500mg each) two times a day with <i>Ushnodaka</i> before meal till <i>Niramalakshana</i> appears.
7 March 2023	<i>Koshthashudhhi - Gandharva Haritaki Yoga</i> 2-6 gm dose according to <i>Kostha</i> in stat dose for one night
8 March 2023	<i>Jatiphala</i> Oil <i>Uttarbasti</i> 10 ml, once in a day
9 March 2023	<i>Shrungatak Modak</i> were started to patient orally <i>Matra</i> - 1 Modak 2gm BD.
13 April 2023	Investigate 2 nd time for semen analysis and report came with 60million/ml sperm count.
May 2023	Patient's wife first UPT test was found positive after 10 days of her missed period.

Treatment plan

Details of *Uttarbasti* procedure in Male

Instruments:

- *Jathipala* oil
- Infant feeding tube no. 6
- Sterile 10 ml disposable syringe Complete *Uttarbasti* Procedure done in 3 steps

Purvakarma

- Before the procedure patient should passed urine
- General examination of patient was done
- Supine position
- Painting and draping were done

Pradhankarma

- Penis skin was retracted Glans penis was cleaned with disinfectant to avoid infection
- Medicated oil was applied on tip of feeding tube.
- Feeding tube was penetrated into the penile urethra.
- Feeding tube was gently passed into the bladder.
- Oil was slowly inserted into the bladder.

Paschatkarma

- Patient was in supine position for 10–15 minutes.
- Lower abdomen massage was done for few minutes.
- NBM for 2hrs, after 2hr plenty of water, juices are advised.

Drug Posology

1. *Ampachak Vati* - 500 mg - 2tab, BD with *Anupan - Ushnodak*
2. *Gandharva Haritakyadi Yoga* - 2-6 gm according to *Kostha* in stat dose for one night
3. *Jatiphala* oil - 10ml, once in a day

Drug review

Chemical Constituents of *Shrungatak*^[6]

Starch, protein, calcium, carbohydrates, phosphorus

Drug Action: *Vrushya, Prajasthapana, Balya, Pittashamak, Daahprashaman, Stambhan, Raktapittashamk, Mutral*^[7]

Drug properties^[8]

Rasa - Madhur, Kashaya;

Guna -Laghu, Ruksha;

Virya - Sheeta;

Vipak - Madhur

Pathya-Apathya advised to patient

Pathya

Patient was advised to take milk and milk products, cowghee, and gruel in routine diet. He was also advised to include red variety of rice, wheat, banana, coconut milk, supernated part of butter milk, *Sharkara*, castor oil, honey and old jaggery in his diet. Patient was also advised to do massage over body, *Surya Namaskara*, light exercises, meditation and *Yoga* on daily basis.

Apathya

Patient was asked to avoid excessive intake of pungent, bitter and salt in routine diet. Patient should ask to avoid stress, worry, excessive exercise, excessive coital activity and suppression of natural urges.

RESULT

Result of this case report show that after performing *Jatiphala Oil Uttarbasti* followed by internal medication *Kshrungatak Modak*, sperm count increased 45 million/ml to 60 million/ml

Investigation	On March 2023	On April 2023
Method	Masturbation	Masturbation
Abstinence	3 days	3 days
Collected at	9:00 am	10:00 am
Examined at	9:20 am	10:20 am
Physical examination		
Quantity	1.0 ml	2.0 ml
Colour	Grayish white	Grayish white
Odor	Normal	Normal
Viscosity	Normal	Normal
Liquification	20 min	15min

PH	Alkaline	Alkaline
Fructose	Present	Present
Microscopic Examination		
Total sperm count	45 million/ml	60 million/ml
Progressive/ forward motility	Grade 0- 30% Sluggish motile- 40%	Grade 0- 20% Sluggish motile- 30%
Total motility	30%	50%
Pus cells	4-6/ Hpf	2-4 Hpf
RBC Cells	Nil	Nil
Morphology	Normal	Normal

DISCUSSION

Ayurveda is an ancient science that dates back to that times when modern medicine even did not exist. The science aims at improving the overall health of a person as well as solves the infertility problems. *Ayurvedic* medicines and therapies balance the hormones; improve blood circulation and acts on the nervous system. These results can be attributed to *Vrushya* effect of *Shrungatak Modak* for the study. The ultimate aim of treating Oligospermia or may be any case of infertility is to get conception. Though the duration of the treatment was less in the study, it was very pleasing to hear that couple achieved conception after the treatment in variable period of time.

Effect of Jatiphala Oil Uttarbasti

Ayurveda philosopher had mentioned *Shaman* and *Shodhan Chikitsa* for the treatment of infertility. *Panchakarma* provides best efficacy because it helps in balancing *Doshas* and *Dushyas*. *Uttarbasti* is such type of therapy being indicated for infertility. Cleansing action of *Uttarbasti* clears the genital passage and restores the functions. The *Sneha Basti* administered in *Uttarbasti* will be having a supportive role. They are nutritive in function and will improve the blood circulation, nerve conduction and immunity of the

organs. *Ayurveda* specifically mentioned *Uttarbasti* for *Shukra Doshas*. Therefore, drugs that are administered in *Basti* form are said to enhance the quality and quantity of *Shukra*. The line of treatment of *Ksheenashukra* should be based on *Vrishya* drugs having *Shukravridhikara* properties. So, *Jatiphala* oil is selected which is particularly *Vryishyakar*. *Jatiphala* (*Myristica fragrance*) effectively removes free radicles as assessed by reducing level of various oxidants and improve level of diverse antioxidants. Due to its Primary constituents *Elemicin* and *Myristicin*, increases the level of central catecholamine which is mediator for maintain raise in *FSH*, *LH*, and *Testosterone*, which acts on *Sertoli cells* and *Leydig cells* and supports the *Spermatogenesis*.^[9] In *China*, *India*, and the middle east it was used to induce sexual arousal, review marriages and help with fertility. It can increase the volume of sperm count, so it acts as *Sperm Booster*. Also, according to *Ayurved Vidnyan*, *Jatiphala* Oil has *Samuttejan* property.

Effect of *Kshrungatak Modak*

Kshrungataka (water chestnut or *Caltrops*) belongs to *Amradi Phalavarga* according to *Bhavaprakash*^[10] and *Mulakadi Varga* according to *Rajnighantu*. It has a chemical constituent's starch, calcium, protein, carbohydrates and phosphorous.

According to *Bhavaprakash*, *Kshrungatak* is *Vrushya* (Improve the potency) drug. It plays a role of *Prajasthapan* as well as *Balya* and *Pittashamak*.

It has a *Madhur* and *Kashaya Rasa*, *Laghu Guna*, *Madhur Vipaka* with *Sheeta Virya*. The fruit of it is used to improve the sexual potency.

The line of treatment of *Ksheenashukra* should be based on *Vrishya* drugs having *Shukravridhikara* and *Prajasthapan* properties. So here we selected *Kshrungatak Modak* to treat oligospermia. This plays an important role as *Prajasthapan*.

CONCLUSION

To conclude, this study that Treatment based on *Ayurveda* principles was found to be effective in male infertility. Patient with *Oligospermia* in improving sperm count. All the *Lakshanas* mentioned for *Ksheena*

Shukra such as *Sada*, *Brahma* etc, was not found in the patient, so lab investigation like semen analysis plays a vital role in diagnosis and Assessment of prognosis. Are search study concluded that disturbing lifestyle and working stress resulting in changing dietary habits, sleeping habits leads to disturbance in metabolism of body as well as psychological stress and it affects all *Dhatus* including *Shukradhatu*. In addition, it results in a hormonal imbalance. Finally, it concerns the male sexual activity, which is one of the major causes of male infertility.

SCOPE OF STUDY

It can be a field of research and recommend larger and more rigorous studies such as randomized control trials to get more conclusive results. *Vajikaran* or *Vrishya Chikitsa* is one of eight major specialities of the *Ashtang Ayurveda*. *Ayurveda* remedies can be helpful for infertile patients to achieve healthy progeny.

Before Treatment

SHREE SAPTASHRINGI AYURVED MAHAVIDYALAY & HOSPITAL	
KAMAL NAGAR, HIRAWADI, PANCHAVATI, NASHIK - 422 003.	
☎ : (0253) 2518548, 2621565	
PATIENT'S NAME :- Mr. Jivan Yadav	DATE :- 2/03/2023
Ref. BY :- Dr. More	AGE :- 28 Yrs /SEX M
SEMEN ANALYSIS	
PHYSICAL EXAMINATION :-	
Quantity :- 1.0 ml	Colour :- Grayish White
Appearance :- Opaque White	PH :- Alkaline
Liquefaction Time :- 20 Min	Viscosity :- Normal
CHEMICAL EXAMINATION :-	
Fructose :- Present	
MICROSCOPIC EXAMINATION :-	
Total Sperm Count :- 45 Millions/ml	N :- 60-120 Millions/ml
MOTILITY :-	N :- 60-95 %
Grade I & II (Sluggishly Motile) :- 40%	
Grade III & IV (Motile) :- 30%	
Viability :- 25% After 1 Hr	N :- 45% After 1 Hr.
Abnormal Form :- 20%	
Morphology :- Normal	
Pus Cells :- 4-6 /Hpf	
REMARK :- Oligospermia	
Thanks S.S.A.M. & H.	

After Treatment

SHREE SAPTASHRINGI AYURVED MAHAVIDYALAY & HOSPITAL
KAMAL NAGAR, HIRAWADI, PANCHAVATI, NASHIK - 422 003.
☎ : (0253) 2518548, 2621565

PATIENT'S NAME :- Mr. Jivan Yadav DATE :- 13/04/2023
Ref BY :- Dr. More AGE :- 26 Yrs /SEX M

SEMEN ANALYSIS

PHYSICAL EXAMINATION :-
Quantity :- 2.0 ml Colour :- Grayish White
Appearance :- Opaque White PH :- Alkaline
Liquification Time :- 15 Min Viscosity :- Norml.

CHEMICAL EXAMINATION :-
Fructose :- Present

MICROSCOPIC EXAMINATION :-
Total Sperm Count :- 60 Million/ml N :- 60-120 Millions/ml

MOTILITY :- N :- 60-95 %
Grade 'O' (Non Motile) :- 20%
Grade I & II (Sluggishly Motile) :- 30%
Grade III & IV (Motile) :- 50 %
Viability :- 35 % After 1 Hr N :- 45% After 1 Hr.
Abnormal Forms :- 20 %
Morphology :- Normal
Pus Cells :- 2-4 / Hpf

REMARK :- Within Normal Limit.

Thanks
Dr. More
S.S.A.M. & H.

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