

“Efficacy of Virechana, Basti and Panasa Beeja Churna in the management of Ksheenashukra w.s.r to Oligoasthenospermia : An Open Randomised Comparative Clinical Study”

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ABSTRACT

Purpose – A healthy reproductive system is necessary for healthy and good progeny, otherwise it leads to Infertility. Infertility is a problem of global proportions, affecting on an average 8 - 12% of couple worldwide. Among these 30% of the male infertility is due to the factors like Oligospermia, Asthenozoospermia, Azoospermia etc. Near about 10% of couples fail to conceive with the help of In-Vitro Fertilization (IVF) and Assisted Reproductive Techniques (ARTs) which are costliest. Ayurveda discussed Male Infertility under Shukradushti where both quality and quantity of Shukra has hampered. Present work is done to evaluate the efficacy of Virechana, Basti Karma and Shamanaushadhi in the management of Ksheena Shukra w.s.r. to Oligoasthenospermia.

Materials and Methods – Materials have been collected from classical Ayurvedic texts, and Commentaries. The selection of patients was made from OPD / IPD BVVS Ayurved Medical College and Hospital, Bagalkot, Karnataka.

Conclusion – Virechana and Basti Karma along with Panasa Beeja Churna individually have good effect but Panasa Beeja Churna given after both Virechana Karma followed by Basti Karma has shown highly significant on Ksheena Shukra.

Key words – Ksheena Shukra, Oligoasthenospermia, Virechana, Basti Karma and Panasa Beeja Churna

INTRODUCTION

Since Vedic period, to have healthy children has been praised and desired. Love, strength, happiness, professional

excellence, wide spread influence, fame, pleasure are reliant upon children. Nature has gifted living being with the unique quality to procreate;

these are the key of existence and survival of their own generation. Every human has always been instrument of this rule of nature to become a parent. Parenting is always an important aspect of social life. On the other hand, infertility has been considered as a cursed condition and is looked as a medico-social problem, as it is said that a person without a child is like a tree just with one branch devoid of fruits and shadow with an unwanted smell¹. Many aspects of male infertility are poorly understood, and many cases of male infertility are diagnosed as idiopathic² \except some physical defects, low sperm count and poor sperm quality are responsible for the male infertility more than 90% of cases. Male factor is present in one half of infertile couples³. Some of the known responsible factor for male infertility are poor semen quality, endocrine inter relationship, testicular function and genetical factors etc⁴. Infertility is defined as the inability of a couple after 1 year of coital activity without contraception (Mosher and Pratt 1991). In today's era, increased mental stress, tobacco – alcohol addiction, pollution, faulty eating & clothing habit, change in culture etc. have endangered

reproductive capacity of men, leading to Ksheena Shukra and ultimately ending up with infertility. Oligozoospermia means the sperm count is less than 20 million per ml and Asthenozoospermia means the motility of spermatozoa is lower than 50% of active motile sperms (WHO1992)⁵. In Oligoasthenozoospermia both less number of sperm and low motility are found. For successful fertility sperm count should be 40 million/ml or more, but studies have shown that if sperm cells are having good progressive motility besides less sperm count (less than 10 million/ml), there was a reasonable, probability of conception. Ksheenashukra is denoted among eight type of Shukradushti, enumerated in Ayurveda classics. Acharya Sushruta clearly defines the condition of Ksheena Shukra to be Vata – Pitta predominant⁶ and Upachaya is stated as treatment⁷ in this condition. Shodhana i.e., Panchakarma therapies have been kept in supreme veneration by the classical authorities of Ayurveda in ameliorating different varieties of Shukradushti. To overcome this defect, in modern science they always opt for ART (Assisted Reproductive Technique) but many patient are not affordable and will

not agree for these line of treatment. And it is not having 100% successful rate. But in Ayurveda it has Panchakarma and Vajikarana dravyas which acts better in male infertility without causing any discomfort to the patient.

The role of Shodhana procedures as preoperative regimens before the administration of medicine is adequately substantiated by Acharya Charakaa, as mentioned that with these therapies only, the occluded channels in the body can be cleared off to enhance the therapeutic efficacy of the drug⁸. It is clear from the available references that Virechana enhances the quality level of Shukra⁹. Therefore, Virechana Karma was selected for the present study.

According to Ayurveda, Basti is administered through anal route provides nourishment to whole body as water given in roots of a tree provides nourishment to whole plant¹⁰. Pakwashaya is the main seat of Apana vayu which performs the function of Shukra Pravartana. By controlling Apana vayu, basti shows its effect on Shukra dhatu. Hence Basti is selected for the present study.

Vajikarana dravyas are the important mode of treatment explained for

infertility in Ayurveda, which possesses the main action to control and improve the reproductive system. Hence Panasa Beeja Churna one of the Vajikara yoga is selected for the present study.

Hence, the present study is an attempt to evaluate the efficacy of Virechana, Basti and Panasa Beeja Churna in the management of Ksheena Shukra w.s.r to Oligoasthenospermia.

AIMS AND OBJECTIVES

- The broad aim of this study is to establish the effective Ayurvedic remedy for Ksheenashukra w.s.r. to Oligoasthenospermia.

The specific objectives are :

1. To assess the efficacy of Virechana Karma and Panasa Beeja Churna in the Management of Ksheenashukra w.s.r to Oligoasthenospermia.
2. To assess the efficacy of Basti Karma and Panasa Beeja Churna in the Management of Ksheenashukra w.s.r to Oligoasthenospermia.
3. To assess the combined efficacy of Virechana, Basti and Panasa Beeja Churna in the Management of Ksheenashukra w.s.r to Oligoasthenospermia.

MATERIALS AND METHODS

For the clinical study, 60 male patients complaining of symptoms of Ksheena Shukra or suffering from primary or

secondary infertility from more than one year and having sperm count less than 15 million/ml and willing to participate for the clinical trial were selected irrespective of religion, caste from the OPD of BVVS Ayurved Medical College and Hospital, Bagalkot. Ethical clearance was obtained from Institutional Ethics Committee of Institute; Vide Ref-, Dated:27/08/2015. The study has also been registered in CTRI (Clinical Trials Registry- India) (CTRI; www.ctri.nic.in) vide CTRI/2015/11/010112 Informed consent was also taken from all the study subjects before including them in the present study.

Inclusion criteria

1. Patients diagnosed with Ksheenashukra/Oligoasthenospermia
2. Patients of age group 21-45 years
3. Patients to be fit for Virechana and Basti Karma

Exclusion Criteria

1. Patients diagnosed with Aspermia, Necrozoospermia, Tertazoospermia, Azoospermia
2. Patients having genetic disorders, congenital disorders and structural deformity of male reproductive system
3. Patients suffering from any other systemic disorders

DIAGNOSTIC CRITERIA

Diagnosis was made on the basis of classical signs - symptoms and on semen analysis.

Lab Investigations

1. Semen Analysis
2. Tridot Test
3. HbsAg
4. Scrotal USG

Method of semen analysis :

Collection of semen sample: Sexual abstinence of 3-5 days was strictly followed in collection of sample in the study to avoid natural fluctuation in semen parameters with duration.

Method of Collection:-

Preferably masturbation was recommended for the collection of semen sample because there are fewer chances for contamination and it provides the complete collection of ejaculate. Before collection to avoid contamination all the patients were instructed to clean the hands and glans penis thoroughly with tap water. Collection was done adjacent to the Laboratory. If the patient fails to masturbate, penile vibrator was used to induce the ejaculation. In case of failure of both of above said methods, collection by coitus interruptus method was advised. The different timings of the day is having effect on the quality of semen (Valsama 1988). In

the present study to avoid such differences the collection time was fixed between 8.30 am to 9.30am throughout the study period.

Precleaned, warmed and labeled wide mouth containers i.e. 50ml glass beakers were used for semen collection. After collection the semen samples were examined at room temperature for Volume, percentage of motility, Liquefaction time, Morphology, Total sperm count, and presence of White blood cell.

Criteria for assessment

Subjective Parameters : Klaibya, Mukhashosha, Pandu, Shrama, Daurbalya, Medra Vedana, Vrushana Vedana, Shukra Avisarga.

Objective Parameters : Semen Analysis as per recommended standards of Semen examination by WHO.

STATISTICAL ANALYSIS

General data was subjected to suitable statistical analysis such as descriptive statistics for demographic data, wilcoxon Signed Rank test for non-parametric paired data, paired t-test for quantitative parametric paired data, unpaired t-test for quantitative unpaired data.

METHODOLOGY

Grouping : A total of 60 subjects were selected and were divided into three groups.

A. Group A : 20 Subjects – Virechana Karma¹¹ with Shamanaushadhi

B. Group B : 20 Subjects – Basti Karma¹² with Shamanaushadhi

C. Group C : 20 Subjects – Virechana, Basti Karma and Shamanaushadhi. Shamanaushadhi common to all 3 groups is Panasa Beeja Churna¹³.

GROUP A - VIRECHANA KARMA AND SHAMANAUSHADHI

- Deepana - Pachana (Chitrakadi Vati 250mg BD with Ushnajala) till Nirama Laxanas
- Abhyantara Snehapana with Murchita Tila taila till Samyak Snigdha Laxanas appear.
- Sarvanga Abhyana with Murchita Tila taila followed by Sarvanga Swedana – For next 3 days
- Virechana Karma with Trivrutta lehya 40-50 gms with 250ml of milk – Assessment of Shuddhi was done.
- Samsarajana Karma – For 3/5/7 days
- Shamanaushadi : Panasa beeja churna 6gm BD with milk

GROUP B - BASTI KARMA AND SHAMANAUSHADHI

- Deepana - Pachana (Chitrakadi Vati 250mg BD with Ushnajala) till Nirama Laxanas
- Basti Karma (Kala Basti Pattern)
Anuvasana : Murchita Ghrita
Niruha : Madhutailika Basti

- Shamanaushadi : Panasa beeja churna 6gm BD with milk
 - Virechana Karma with Trivrut lehya 40-50 gms with 250ml of milk – Assessment of Shuddhi was done
 - Samsarajana Karma – For 3/5/7 days
 - Basti Karma (Kala Basti Pattern) Anuvasana : Murchita Ghrita Niruha : Madhutailika Basti
 - Shamanaushadi : Panasa beeja churna 6gm BD with milk
 - **Treatment Duration** : 50 – 60 days
 - **Follow Up** : After 30 days
 - **Total Duration** : 90 days
- GROUP C - VIRECHANA, BASTI KARMA AND SHAMANAUSHADI**
- Deepana - Pachana (Chitrakadi Vati 250mg BD with Ushnajala) till Nirama Laxanas
 - Abhyantara Snehapana with Murchita Tila taila Till Samyak Snigdha Laxanas appear.
 - Sarvanga Abhyanaga with Murchita Tila taila followed by Sarvanga Swedana – For next 3 days

RESULTS STATISTICAL ANALYSIS

EFFECT ON DOORBALYA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	t	P
A	2.85	1.70	1.15	40.35	0.57	0.13	14.0385	<0.0001
B	2.95	1.10	1.85	62.71	0.55	0.12	16.9067	<0.0001
C	3.05	0.55	2.50	81.96	0.51	0.11	21.7945	<0.0001

EFFECT ON MUKHASHOSHA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	t	P
A	1.30	0.80	0.50	38.46	0.80	0.12	4.3589	<0.0003
B	1.55	0.45	1.10	70.96	0.60	0.14	6.8496	<0.0001
C	1.90	0.15	1.75	92.10	0.37	0.08	14.226	<0.0001

EFFECT ON PANDU

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	T	P
A	1.55	0.75	0.80	51.61	0.64	0.14	4.6599	=0.002
B	1.85	0.55	1.30	70.27	0.60	0.14	7.2553	<0.0001
C	1.85	0.10	1.75	94.59	0.31	0.07	8.5959	<0.0001

EFFECT ON SHRAMA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	T	P
A	2.90	1.65	1.25	43.10	0.59	0.13	10.1617	<0.0001
B	3.00	1.05	1.95	65.00	0.60	0.14	12.7062	<0.0001
C	3.00	0.55	2.45	81.66	0.51	0.11	18.1161	<0.0001

EFFECT ON KLAIBYA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	t	P
A	2.20	1.20	1.00	45.45	0.77	0.17	7.9582	<0.0001
B	2.40	0.85	1.55	64.58	0.75	0.17	11.4612	<0.0001
C	2.50	0.30	2.20	88.00	0.47	0.11	14.1391	<0.0001

EFFECT ON MEDRA VRUSHANA VEDANA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	t	P
A	2.10	0.90	1.20	44.68	0.55	0.12	10.2582	<0.0001
B	2.20	0.55	1.65	75.00	0.60	0.14	15.0789	<0.0001
C	2.15	0.25	1.90	88.37	0.44	0.10	19.0000	<0.0001

EFFECT ON SHUKRA AVISARGA

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	T	P
A	2.35	1.30	1.05	44.68	0.57	0.13	9.1998	<0.0001
B	2.25	0.70	1.55	68.88	0.57	0.13	13.5807	<0.0001
C	2.35	0.55	1.80	76.59	0.51	0.11	15.3873	<0.0001

EFFECT ON SPERM COUNT

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	T	P
A	2.25	1.15	1.10	48.88	0.81	0.18	8.9037	<0.0001
B	2.40	0.85	1.55	64.58	0.67	0.15	13.5807	<0.0001
C	2.55	0.30	2.25	88.23	0.47	0.11	18.2911	<0.0001

EFFECT ON SPERM MOTILITY

GROUP	MEAN		DIFF IN MEANS	% of Relief	PAIRED t TEST			
	BT	AT			SD	SEM	t	P
A	2.25	1.10	1.15	51.11	0.45	0.10	10.5095	<0.0001
B	2.50	0.90	1.60	64.00	0.55	0.12	14.2361	<0.0001
C	2.50	0.30	2.20	88.00	0.47	0.11	15.9826	<0.0001

EFFECT OF THERAPIES ON SUBJECTIVE PARAMETERS

Effect on Dourbalya :

All the 3 groups have significant effect on Dourbalya with percentage of 40.35% relief in group A, 62.71% relief in Group B and 81.96% of relief in

Group C. Hence its understood that Group C is having more efficacy on Dourbalya comparing to Group A and Group B.

Effect on Mukhashosha :

On Mukhashosha also all 3 groups have effect but in Group A its not significant

effect. But Group B and Group C having 70.96% of relief and 92.10% of relief respectively. So on Mukhasosha also Group C having more effect comparing to Group A and Group B.

Effect on Pandu :

All the 3 groups have significant effect on Panduta with percentage of 51.61% relief in Group A, 70.27% relief in Group B and 94.59% relief in Group C. Here also Group C better than Group A and Group B.

Effect on Shrama :

Shrama is relieved in all the 3 groups with percentage of 43.10% in Group A, 65% in Group B and 81.66% in Group C. Hence shrama is relieved more effectively in Group c comparing to Group A and Group B.

Effect on Klaibya :

On klaibya Group B and Group C are having more effect i.e. 64.58% relief in Group b and 88% relief in Group C. So Group c showed more effect on Klaibya lakshana

Effect on Medra Vrushana Vedana

:

Medra Vrushana Vedana got reduced in all the 3 groups with percentage of 44.68% relief in Group a, 75% relief in Group B and 88.37% relief in Group c.

Effect on Shukra Avisarga :

Shukra avisargata has got normalcy with percentage of 44.68% in Group A, 68.88% in Group b an 76.59% in Group c hence in case of Shukra avisargata Group C treatment play better role by comparing to Group A and Group B.

EFFECT ON OBJECTIVE PARAMETERS

Effect on Sperm Count :

Semen analysis has been done before treatment and after treatment. There was significant increase in the sperm count after treatment in all the 3 groups. Group A have 48.88% of improvement. Group B have 64.58% of improvement and 88.23% of improvement seen in Group C. Hence here also Group C showed more effect than group A and Group B.

Effect on Sperm Motility :

Sperm motility has increased by all the 3 groups with percentage of 51.11% improvement in Group A, 64% improvement in Group B and 88% improvement in Group C. So Sperm motility has significant effect by the group C treatment than Group A and Group B.

Total effect of Therapy :

By above statistical analysis we can understand that Group B and Group C have more positive effect than Group A

and in that Group C showed extremely significant on all subjective and objective parameters.

DISCUSSION

By above results we can say that Virechana and Basti karma both treatment modalities have effect on Ksheena Shukra w.s.r. to Oligoasthenospermia individually and also combined along with Vajikarana Dravya Yoga. But when we administer Vajikarana Dravyas after Shodhana i.e. Virechana it have good results, when we administer Vajikarana Yoga after Basti Karma it showed better result but when we administer Vajikarana Yoga After Virechana followed by Basti it acts best in Ksheena Shukra hence we have to go for Shodhana First after that we should control Apana vata which is Shukra Pravartaka by Basti then we have to administer Vajikarana Dravya. But when we compare any of the 3 groups to modern science treatment it shows that Ayurveda plays very important role in Ksheena Shukra w.s.r to Oligoasthenospermia in improving the semen analysis without any complications.

Mode of Action of Virechana :

Virechana is one of the Karma of Panchakarma therapy.

Yoni Retodosha :

A Virechya vyadhi. Virechana might have effect as Vyadhiviparita Chikitsa. Acharyas have given a list of the various disease conditions (Virechyah Vyadhi) where Virechana Karma is ideal to administer as prior choice of therapy. Retodosha is one among Virechya Vyadhis.

Vyadhiviparita Chikitsa :

Charakaa Acharya advocates Shodhana as Vyadhipratyatmak Chikitsa for the treatment of Shukra Pradoshaja Vikara. Given by Acharya Sushruta through Virechana Karma shows the rejuvenating aspect of Virechana Karma. It makes all the metabolism optimum level. Thus Production of Sarabhoota dhatus, having good maintenance and timely disintegration. These will also increase quality and quantity of Shukra. It put the person nearer to its Moolaprakriti.

As A Dosa Pratyahnik Chikitsa :

In the pathogenesis of Ksheena Shukra, there is involvement of Pitta and Vata. In order to alleviate the Pitta Dosa, Virechana is the prime purificatory procedure. Pitta is Agneya Mahabhuta Pradhana, while Shukra is Jala Mahabhuta Pradhana, so in order to increase the Saumyata one has to

decrease the Agni Tatva, which can be achieved through Hrasa Hetu Visheshasthu principle. Once the Agneya Tatva in Ksheena Shukra has been conquered, the Saumyata of Shukra can be increased by application of Samanyam Vriddhi karanam i.e. Vrishya Dravya as like Panasa Beeja Churna are effective.

Acharya Kashyapa describes wonderful benefit of Virechana Karma and very precisely states that the effect of Virechana enhances the structural and functional capabilities of reproductive gametes. Acharya Kashyapa has mainly highlighted the role of Virechana on Shukra dhatu. According to him by the action of Virechana, the function of Shukra increases i.e. Shukra becomes more active. The whole process helps in removing the free radicals (oxidants) present in the micro circulatory channels of Shukravaha Srotasa, which interferes with the function of Shukra and by doing so, increases the activity of Shukra (motility) as well as Shukra Vaha Srotas and the respective Dhatvagni thereby facilitating the production of more Shukra Dhatu.

(Volume, Count)

Further, Virechana Karma increases the bio-availability of drugs by opening

channels and improves the nutritional assimilation of the trial drug.

Hence Virechana is the line of treatment for Ksheena Shukra.

Mode of action of Basti :

The specialties, importance and utility of Madhutailika Yapana basti selected for the trial can be enlisted as follows:

1. Yāpana basti is a therapeutic modification of basti karma by adding Madhu and Taila as equal quantity.
2. Yāpana basti as the name in the maintain, nutritive to and longevities life and cure diseases.
3. It improves bala, varña, upacaya and explained as auspicious
4. It can be administered in OPD populations without admission to the hospitals. Travelling in the vehicles, sexual act, food articles etc are not contra indicated.
5. It serves dual function of nirooha and anuvasana. It acts as sodhana as well as shamana. It does not cause vata vitiation like other nirooha.
6. It is explained as both anabolic (brimhana) and ante lipideamic (medohara). It is not ekanta lekhanam or ekanta brimhiña.
7. It improves agni and relieves vibandha. It is balya, vrishya and rasayana.

8. It is suitable to all strata of society irrespective of age, sex, status, job etc. It is an ideal basti for physically and mentally tender persons.

9. Its total quantity for administration is less.

10. It has wide spectrum therapeutic indications and efficacy.

11. It can be administered at any time and any rutu. No pascatkarma or poorvakarma is required.

12. Its retention is longer than nirooha basti.

13. It has no complications

14. There is no need of any pathyapathya care during administration. There is no necessary pariharakala.

15. Erandamula is vrishyavatahara; madhu is yogavahi, balya and sukropacaya; taila is vātasamaka, balya and vrishya; satapushpa is putraprada and veeryakari; and saindhava is vrishya.

The group was shown certain reasonable voluntary control over ejaculation at significant level. This is due to the direct neurobiological effect of basti on aggravated vata and pacification of it at its on side. This may be achieved by a reduction in the shortness of nerve latency time or

decrease in the rapidity of all reflexes. The aggravated cala (seeghra) property of vata on psychosexual parlance may be reduced by better niyantrana and subsequent controlled prerana. So basti may be an ideal choice in management of Oligoasthenospermia.

Mode of Action of Panasa Beeja Churna :

Due to Madhura Rasa, Shita Virya, Snigdha Guna of Panasa Beeja Churna, Vata and Pitta Shamana take place which are the Dosha involved in the pathogenesis of Ksheena Shukra. It leads to Shukra Gata Vata-Pitta Shamana. Additionally Panasa beeja Churna possess vrishya effect and hence increases the production of spermatozoa which ultimately causes increase in sperm count and Sperm Motility also increases.

CONCLUSION

Near about 10% of couples fail to conceive with the help of In - Vitro Fertilization (IVF) and Assisted Reproductive Techniques (ARTs) which are costliest but Ayurveda helps in such conditions without any complication and burden to the patient.

By the above clinical trial we can conclude that the Ayurvedic treatment modalities like Virechana, Basti and

Vajikarana Dravyas are having highly significant effect in Ksheena Shukra. But when we administer Vajikarana Yogas after Shodhana followed by Apana Vata Anulomana by Basti these Vajikarana dravyas nourishes the Shukra Dhatu and helps in normal visarga and thus increase the Sperm Count and Sperm Motility.

Ayurveda becoming the main stream of management in Male Infertility so by using such clinical trials one can create awareness in society about the importance of Ayurveda Treatment in Oligoasthenospermia and help the society to continue the Progeny by making them fertile.

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**Source of Support: NIL
Conflict of Interest : None declared**