Original Research Paper Ayurved

EFFICACY OF VIRECHANA & SHAMANA WITH APATYAKARA GHRITA IN KSHINA SHUKRA W.S.R. TO OLIGOZOOSPERMIA

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ABSTRACT Despite great advances made by medical science in understanding each stage of the reproductive process, still infertility is a catastrophe and male is accountable in 26.2 - 46.6% of the cases of infertility. Oligozoospermia denotes less than 20 million spermatozoa per milliliter of ejaculation, and a prime cause responsible for male infertility. *Ayurveda* had realized these dysfunctions, which leads to *Klaibya* or *Vandhyatva*, and denote it as *Ashta Retodosha*. Among these, the concept of *Kshina* Shukra may be correlated with oligozoospermia. *Shodhana* therapies hold a good reputation in the treatment of Shukradosha and thus prescribed as best treatment regimen to confer the progeny and virility. *Virechana* Karma was selected to treat the condition as well as to appraise its role in this condition. Apatyakara Ghrita possesses *Vrushya* and *Shukrala* properties, which again help to combat the condition. Hence, in this study in Group A, *Apatyakara Ghrita* was used for *Snehana* prior to *Virechana*, whereas in Group B it is used for *Shamana*. Both the groups having 10 patients in each were treated for 45 days, and highly significant result was found. As per statistical evaluation, both groups were equally effective for the condition in present study.

KEYWORDS : *Shukra, Kshina Shukra, Virechana,* Male Infertility, Oligozoospermia

INTRODUCTION:

Birth and death are two ends of life, in between man has to pass a lot of sufferings and pain to survival and others. Some have to face an extra struggle i.e. struggle to reproduce or have an offspring, which is termed Infertility. In fact, there has been a drastic change in his day to day activities including life style, food habits, sexual life, environmental pollution, industrial and occupational hazards and due to all these factors, infertility is increasing day by day.

Ayurveda also state this as a worse condition in the words as a man without progeny is like a solitary tree . It severely affects the couple's psychological harmony, sexual and social life. The couple desiring a child but unable to conceive feels demeaned, deprived and bitterness. Generally, due to defect in spermatic function, male is unable to induce conception due to low sperm count. Oligozoospermia means less than 20 million spermatozoa per milliliter of semen .

Kshina shukra is denoted among eight type of Shukra Dushti, enumerated in Ayurveda classics. *Acharya Sushruta* clearly defines the condition of *Kshina Shukra* to be *Vata – Pitta* predominant[3] , and *Upachaya* is stated as treatment[4] in this condition. *Shodhana* i.e. *Panchkarma* therapies have been kept in supreme veneration by the classical authorities of *Ayurveda* in ameliorating different varieties of *Shukradushti*[5] . By the use of these *Shodhana* therapies, one gets rid of diseases, as well as gains strength, plumpness, offsprings and virility . To get enough virility or strength, before Shodhana, Srotasa should be clean to resort the aphrodisiac recepies. Acharya has explained the same phenomenon with the example of dirty cloth[7] .

Among these *Panchkarma, Virechana* mainly aims at eliminating the vitiated *Pitta Dosha* [8]. While describing the therapeutic measures for *Klaibya* in details, Acharya Charaka stated that after giving proper oleation and fomentation, patient should be given *Virechana* with *Sneha* [9]. *Acharya Kashyap* describes wonderful benefit of *Virechana Karma* and very precisely states that the effect of *Virechana* enhances the structural and functional capabilities of reproductive gametes[10] . Keeping all these points in mind, clinical trial was carried out in 20 patients divided into two groups, where *Apatyakara Ghrita* was used for *Snehana* prior to *Virechana* in Group A, and in Group B it is used as *Shamana*. *Apatyakara Ghrita*[11] contains *Shatavari* (Asparagus reacemosus), *Vidarikand* (Pureria tuberosa), *Masha* (Phaseolus mungo), *Atmagupta* (Mucuna pruriens) and *Gokshura*(Tribulus terrestris). All these drugs are having *Madhura Rasa, Guru – Snigdha Guna* and *Madhura Vipaka*, which helps to increase the quality and quantity of *Shukra.*

Keeping above mentioned views in mind the present work was carried out with following aims & objectives:

- To evaluate the role of *Virechana* in the management of *Kshina Shukra.*
- To compare the efficacy of *Apatyakara Ghrita* with or without *Virechana* in the management of *Kshina Shukra*.

Materials & Methods:

Clinical material comprised of the data and investigations carried out in 20 patients (10 patients in each) suffering from *Kshina Shukra* reported at OPD/IPD of Government Akhandanand Ayurved College & Hospital – Ahmedabad.

Criteria for selection of patient:

Patients having classical signs and symptoms of *Kshina Shukra* were selected for the present study without any bar of caste &creed, religion, financial status etc by random sampling, for further semenogram analysis.

Exclusion Criteria:

Patients presented with organic defects, post surgical procedure or post trauma on the genital organs were not included in this study. The decrease of Shukra owing to long standing chronic disorders were excluded from the study. Patients having any history of Sexually Transmitted Disorders or any major metabolic ailment were also excluded.

Drugs:

Apatyakara Ghrita : *Abhyantara Snehapana* was carried out by *Apatyakara Ghrita. Ghrita* is prepared as per process mentioned in reference. *Separate Kwath* is prepared from mentioned 5 *Dravya (Shatavari* : 1 part; *Vidarikanda* : 1 part; *Masha* : 1 part; *Atmagupta* : 1 part; *Gokshura* : 1 part), than *Ghrita* (1 part) & *Dugdha* (8 part) is added and *Sneha* was prepared at Government *Ayurved* Pharmacy, *Rajpipla.*

Virechana Kashaya : Here *Virechana Kashaya (Chikitsa Pradipa)* mixed with *Eranda Taila* is used as *Virechaka Aushadhi*. For *Virechana Kashaya - Markandika* – 1 part, *Haritaki* – 1 part, *Draksha* – 1 part, *Yastimadhu* – 1 part, *Gulab Kalika* – 1 part, *Shunthi* – 1 part, *Trivrutta* – 1 part mixed, and *Yavakuta* was prepared at Government *Ayurved* Pharmacy, *Rajpipla.*

Plan of Study:

GROUP – A: *Pippali Churna* was given for 3-5 days, in dose of upto 10 gm in divided doses for *Dipana*. After that *Apatyakara Ghrita* was

used for the purpose of *Abhyantara Snehana* according to Agni, *Koshtha* and Bala of the patients, in increasing order for 5 to 7 days. When *Samyak Snehana Lakshana* were obtained, a gap of 3 days was given and during this period *Sarvang Abhyanga* and *Swedana* was done. On the day of *Virechana, Virechana Kashaya* with *Erand Taila* was administered according to *Koshtha* of the patient as *Virechana Aushadhi*. Patient was advised to take lukewarm water after administring the *Virechaka Kashaya*. On the basis of *Shuddhi Lakshana, Samsarjana Krama* was advised for next 3 to 7 days. Then, for remaining period(45 – days of *virechana* Karma), patient was alloted *Apatyakara Ghrita* as *Shamana* therapy. Total duration of treatment in this group was 45 days.

Group – B: In this group, patient was alloted *Apatyakara Ghrita* in dose of 20ml per day, with *Sharkara* and *Dugdha* for 45 days.

Criteria for Assessment:
For assessing the patients, before and after the treatment, parameter used were,
A. Clinical assessment B. Laboratory Investigation

A. Clinical Assessment:
Improvement in signs and symptoms of Kshina Shukra and improvement in sexual health parameters (Mehra and Singh 1995) were recorded. A separate gradation scheme was used to evaluate the effect of therapy before and after treatment.

Maithune Ashakti:
No problem in coitus – 0
Able to perform satisfactory coitus once in a day – 1
Able to perform satisfactory coitus after the interval of 2 to 6 days – 2
Able to perform satisfactory coitus after 2 weeks – 3
Not able to perform a satisfactory coitus – 4

Medhra – Vrushana Vedana:
No pain – 0
Occasional pain during coitus – 1
Frequent pain during coitus – 2
Persistent pain during coitus – 3

More than 3 ml. – 0
2 to 3 ml. – 1
1 to 2 ml. – 2
Less than 1 ml. – 3

Semen Investigations :
Semen investigation were carried out at laboratory of Government Akhandanand Ayurved Hospital – Ahmedabad in following aspects :

Volume	Liquefaction	Viscosity	pH
Total sperm count	Motility	Total abnormal forms	

Observations:
The general observations made on 20 patients of Kshina Shukra (oligozoospermia) studied in this clinical trial showed that, 35% patients were from age group of 26-30 and 31-35 years, maximum number of patients i.e. 75% belonged to Hindu community, 30% were educated up to level of higher secondary education, 35% patients were in service and 50% belonged to middle class.

Addiction of tea was exhibited in maximum 60% of patients, 95% had shown no family history of the disease, 55% used hot water regularly for bathing and 45% patients were possessing *Vata-Pitta Prakrutti.* Maximum 80% of patients were having *Madhyama Sara,* 60% of *Madhyama Samhanana,* 65% of *Madhyama Satva,* 70% of *Madhyama Abhyavaharana Shakti* and 50% of *Madhyama Jarana Shakti.*

Most of the patient i.e. 65% had attained their puberty between the ages of 16-18 years, 30% had marriage in between 24-28 years of age. 85% patients were found with the history of masturbation while 45% had positive history of Night emission, 5% patients had unsatisfactory sexual life.

On taking detailed history of the patients, maximum 85% of patients reported with primary infertility and 45% had complaint of Premature Ejaculation while 40% had erectile dysfunction.

During the process of *Virechana*, 70% had started with 40-50 ml of *Sneha* dose on the first day while 60% had 175-225 ml of *Sneha* dose on the last day and 40% had consumed 800-950 ml of total Sneha during *Snehapana*. Most of the patient i.e. 70% got *Samyaka Snigdha Lakshana* on 7th day and in 40% of cases 200-250 ml of *Virechana Aushadhi* was given. First Vega was initiated in 60-80 min. in 50% of cases while in 40% of patient whole process completed in 8-11 hrs. 70% of the patient got *Madhyam Shuddhi Lakshana* on observation.

Effect of Therapy:
Unpaired't' test was applied to compare the efficacy of Virechana *Purvaka Shamana* and only *Shamana.* Statistically insignificant results were obtained in most of parameters, other than *Alpa Shukrata* and Volume of semen, where *Virechana Purvaka* Shaman was found significant.

Statistically, it means that *Apatyakara Ghrita* with and without *Virechana,* found equally significant in most of parameters of this study.

Discussion:
In this study, maximum patients were from 26-30 (35%) year of age, again distribution according to Vaya reveals that 65% were from *Sampurnata* stage of *Vaya*. Fear, mental tension, unwholesome food habits, improper regimen come in the way and this leads to vitiation of biological humors. Also young age is the Pitta *Pradhana Avastha* and along with it above factors vitiate *Vata Dosha*. Also, it is clear that this is the prime age for reproduction.

Majority of the patients were from 1-4 year of marital life span i.e. 45%. Generally couples do not take infertility seriously in the beginning or so many of them are using different contraceptives in earlier married life. But as the time passes, they experienced the lack of conception and then they are worried about it. After trying house remedies and other folk lore medicines, they came at specialty clinics.

Maximum 25% of patients were affected by *Jwara*. *Jwara* may be the cause of poor semen quality and alteration in *spermatogenesis* may takes place by apparently harmless illness such as typhoid fever. Mumps was observed in 20% of patients. It may cause blockage of vas deferens, which may result in subsequent testicular atrophy or impairment of infertility.

55% were using hot water regularly for Snana and excessive use of hot water for bathing leads to increase temperature locally that leads to deviation in spermatogenesis. Most of the patients (45%) were using regularly (in all seasons) hot water for bathing (approximately temperature – 52-55%) since their childhood.

Maximum of patients were taking *Amla-Katu Vipaki Dravya,* followed by *Katu-Tikta-Kashaya* in excess. *Atisevana* of *Ruksha-Laghu-Ushna-Tikshna Gunatmaka Ahara dravya* and *Alpa-Pramitashana* etc. faulty dietary habits leads to Shukra Kshaya. Routinely ingestion of *Avrushya* substances like coriander, black pepper, fennel, excessive use of *Kshara* (alkali) etc. deteriorates the condition.

This type of *Nidana* leads to the production of Ama in the body provokes Vata and Pitta *Dosha* and vitiation of Agni. These factors are stated to be the basic cause for beginning of the *Samprapti Nirmana.*

Effect of *Virechana* Karma:

Shukra is *Saumya* i.e. *Jala Mahabhuta Pradhana*. In the pathogenesis of *Kshina Shukra,* there is involvement of Pitta and *Vata*. 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 *Samya-Visham* principle.In order to remove the vitiated Pitta *Dosha, Virechana* is administered. The active principles of *Virechaka Dravya* are believed to be Soma and *Pruthvi* dominant, as described earlier Shukra is Saumya Pradhana. 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 removing 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 *Dhatwagni* thereby facilitating the production of more *Shukra Dhatu* (Volume, Count).

Virechana may be responsible for rectifying the Pitta Dhara Kala, as it is the main procedure for Pitta *Shodhana*. According to *Acharya Dalhana,* Pitta *Dhara Kala* and *Majja Dhara Kala* are considered to be same. Hence *Majja Dhara Kala* may also be rectified through *Virechana,* which will lead to the formation of pure *Majja* and hence *Shuddha Shukra.* There may also be some relation between Pitta *Dhara Kala* and *Shukra Dhara Kala* as the sequence of *discription*, given by *Acharya Sushruta* is 6th and 7th respectively.

Conclusion:

The application of *Virechana* is a broad spectrum clinical modality, and well known purificatory process for Pitta *Dosha. Srotosuddhi* is achieved by its virtue of *Shodhana*, and thus it improves the Dhatu *Poshana Krama.* Statistically as well as clinically good results were obtained in both the groups, that means both the therapies are effective in the management of *Kshina Shukra* but *Virechana Purvaka Shamana* is more effective than only *Shamana* therapy.

Chart – VII, Distribution of 20 patients of Kshina Shukra according to Nidana

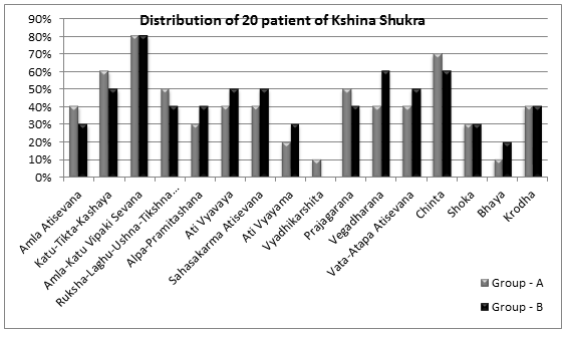

Chart – VIII, Distribution of 20 patients of Kshina Shukra according to Effect of therapy

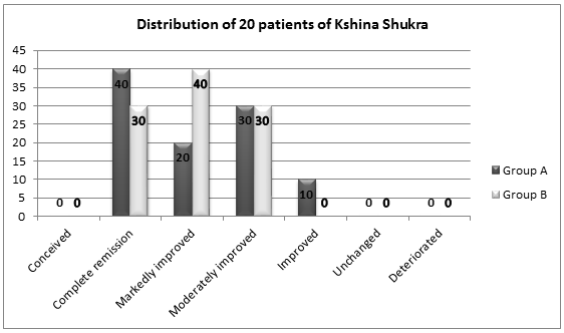

Table – 1 – Lakshana wise distribution of 20 patients of Kshina Shukra

Lakshana	No. of patients				Total	
	Group A		Group B			
Bhrama	04	40%	05	50%	09	45%
Daurbalya	08	80%	07	70%	15	75%
Panduta	05	50%	06	60%	11	55%
Shrama	05	50%	06	60%	11	55%
Alpachestata	06	60%	05	50%	11	55%
Klaibya	06	60%	04	40%	10	50%
Maithune Ashakti	09	90%	07	70%	16	80%
Alpa Shukra Pravrutti	07	70%	07	70%	14	70%

Table – 2 – Effect on Semenogram in Group A

Semen parameter	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Total Sperm Count (million/ml)	7.9	14.8	6.9	87.34	2.96	0.93	7.37	<0.001
Motility (%)	22.5	38.5	16	71.11	9.37	2.96	5.40	<0.001
Volume of semen (ml)	2.5	3.38	0.88	35.2	0.41	0.13	6.82	<0.001
Viscosity of semen	2.7	1.8	0.9	33.33	0.74	0.23	3.86	<0.01

Table – 3 – Effect on Semenogram in Group B

Semen parameter	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Total Sperm count (million/ml)	12.4	17.5	5.1	41.42	3.31	1.04	4.87	<0.001
Motility (%)	28	36.5	10.5	37.5	7.61	2.40	4.36	<0.001
Volume of semen (ml)	2.8	3.37	0.57	20.36	0.34	0.11	5.25	<0.001
Viscosity of semen	2.8	2	0.8	28.57	0.63	0.2	4	<0.01

Table – 4 – Effect on sexual health parameter in Group A

Sex. health parameter	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Sexual Desire	2.4	3.4	1	41.67	0.47	0.15	6.71	<0.001
Erection	2.4	3.3	0.9	37.5	0.56	0.18	5.01	<0.001
Rigidity	0.9	1.5	0.6	66.67	0.52	0.16	3.67	<0.01
Ejaculation	2.3	3.2	0.9	39.13	0.32	0.1	9	<0.001
Orgasm	1.9	2.8	0.9	47.37	0.57	0.18	5.01	<0.001

Table – 5 – Effect on sexual health parameter in Group B

Sex. health parameter	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Sexual Desire	3	3.7	0.7	23.33	0.48	0.15	4.58	<0.001
Erection	2.9	3.6	0.7	24.14	0.48	0.15	4.58	<0.001
Rigidity	1.1	1.6	0.5	45.45	0.53	0.17	3	<0.01
Ejaculation	3.4	4.1	0.7	20.59	0.67	0.21	3.28	<0.01
Orgasm	3.3	4	0.7	21.21	0.67	0.21	3.28	<0.01

Table – 6 – Effect on sign and symptom in Group A

Sign & Symptoms	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Maithune Ashakti	2.1	1	1.1	52.38	0.57	0.18	6.12	<0.001

Medhra-Vrushana Vedana	0.6	0.2	0.4	66.67	0.51	0.16	2.45	<0.05
Praseke Alpashukrata	1.4	0.4	1	71.42	0.47	0.15	6.71	<0.001

Table – 7 – Effect on sign and symptom in Group B

Sign & Symptoms	Mean Score		D	% Relief	S.D. ±	S.E. ±	T	P
	B.T.	A.T.						
Maithune Ashakti	2.43	1.43	1	41.17	0.58	0.22	4.58	<0.001
Medhra-Vrushana Vedana	0.5	0.2	0.3	60	0.48	0.15	1.96	<0.05
Praseke Alpashukrata	0.7	0.3	0.4	57.14	0.52	0.16	2.45	<0.05

Table – 8 – Effect on oligozoospermic grade in Group A

Grade	B.T.		A.T.	
	No.	%	No.	%
Very severe (<5)	03	30%	00	00%
Severe (5-10)	03	30%	03	30%
Moderate (10-15)	03	30%	02	20%
Mild (15-20)	01	10%	01	10%
Normal (>20)	00	00%	04	40%
TOTAL	10	100%	10	100%

Table – 9 – Effect on oligozoospermic grade in Group B

Grade	B.T.		A.T.	
	No.	%	No.	%
Very severe (<5)	00	00%	00	00%
Severe (5-10)	03	30%	00	00%
Moderate (10-15)	03	30%	03	30%
Mild (15-20)	04	40%	04	40%
Normal (>20)	00	00%	03	30%
TOTAL	10	100%	10	100%

Table – 10 – Improvement in oligozoospermic grade in Group A

Grade	B.T.	After Treatment (in %)				
	(in %)	VS	Se.	Mo.	Mi.	No.
Very severe (<5)	30	-	30	-	-	-
Severe (5-10)	30	-	-	20	10	-
Moderate (10-15)	30	-	-	-	-	30
Mild (15-20)	10	-	-	-	-	10
Normal (>20)	00	-	-	-	-	-

Table – 11 – Improvement in oligozoospermic grade in Group B

Grade	B.T.	After Treatment				
		VS	Se.	Mo.	Mi.	No.
Very severe (<5)	00	-	-	-	-	-
Severe (5-10)	03	-	-	03	-	-
Moderate (10-15)	03	-	-	-	02	01
Mild (15-20)	04	-	-	-	02	02
Normal (>20)	00	-	-	-	-	-

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