

AN EFFECT OF ARDHA-MATRIKA BASTI IN THE MANGEMENT OF SHUKRA KSHAYA W. S. R. TO OLIGOSPERMIA

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ABSTRACT

Infertility severely affects the couples psychologically, sexually and socially. The global incidence of infertility is increasing day by day. The contribution of male factor alone to this total infertility is reported as 26.2% to 46.6% (Insler and Lunenfeld, 1993). *Bastikarma* is important treatment in *ShukraDosha* by Charka's statement, "*PrashashtahaShukradosheshuBasti karma Visheshatha*". Chakradutta in *NiruhaBasti* chapter mentions *Ardha-matrikaBasti* which action is *Shukrajanan*, *Vrishya* and *Pumsavan*. It was a comparative clinical study with pre-test and post test design. Selected patients were grouped in to two consisting of 20 patients each. Patient of inclusive criteria are randomly divided into two groups, *Ardha-matrika Basti* group which contains *Dasmoolakwath*, *Til Taila*, honey, *Kalka* of *Mandanphal*, *Shatpushpa* and *Saidhav*. Total 18 *Basti* are given in one group. In other group 3 gram *Ashwagandha Churna* is given twice daily for 60 days. Outcome of therapy was assessed by grading for sexual parameters like Sexual desire, Erection, Ejaculation & Orgasm, Seminal parameters was done by semen analysis. *Ardha-matrika Basti* showed significant improvement in the symptoms of penile erection (46.88%), ejaculation (45.45%), orgasm (50%) and sexual desire (14.29%). It showed significantly increased in sperm count by 98.85%, R.L.P by 57.80% and semen volume by 30.08%. *Ardha-matrikaBasti* shown superior results in the management of Oligospermia

(Key wards- *Ardha-matrikabasti*, *Ashwagandha*, *Dasmoola*, *Shukrakshaya*)

INTRODUCTION

The global incidence of infertility is increasing day by day. In males the quantity and quality of ejaculate are decreasing day by day which may be due to altered life styles, rapid industrialization etc. and may add to the problem of male infertility. A modern medical science has now started realizing its importance so andrology branch has been developed recently.

Ayurveda has separate branch known as *Vajikarana* which deals with promotion of sexual health and prevention

and cure of disorders of semen resulting due to *Shukra Dusti*. *Basti karma* is the best treatment in dealing with *Vatavikaras*¹. *Vata* is held responsible for all types of *Kshaya*² and so for *ShukraKshaya*. *Basti* is important treatment for *Vata* and *vata* related disorders. *Basti* given by using *VrishyaDravya* is called as *Vrishya Basti*³, So *Ardha-matrika Basti*⁴ taken for study which does not require *Snehana* and *Swedana* and there is no specific diet restriction after *Basti*. *Ardha-matrika Basti* is *Madhutailika Basti* which having more

Vajikar effect, so *Ardha-matrika Basti* selected for study.

AIM:To evaluate the effect of *Ardha-matrikaBasti* treatment in the management of Shukra Kshaya (Oligospermia).

OBJECTIVE:

1. To stress the importance of *BastiChikitsa* in *Shukrakshaya*.
2. To study any other associated benefits of *Ardha-matrikaBasti*.

MATERIALS AND METHOD

Selection of patient

Male patients of *Shukra Kshaya* (Oligospermia) were selected from O.P.D. and I.P.D. of S D M college of Ayurveda and Hospital, Hassan, during March 2004 to Jan. 2005.

Study Population: Patient from periphery area of Hassan/ Karnataka.

Sampling: Simple random sampling technique.

Sample Size: 20 patients having Oligospermia after semen analysis willingly participating study were selected from SDM College of Ayurved, Hassan.

Diagnostic criteria: Patients of primary and secondary infertility having Oligospermia (< 20 mill/ml) were selected for clinical study.

Inclusion criteria: Patients diagnosed for Oligospermia.

Patients of age group 21 to 50 years.

Exclusion criteria

Patients suffering from systemic diseases like cirrhosis of liver, CRF, cancer etc
 Patients with structural deformity like Epispadias, Hypospadios, Cryptorchidism, Hydrocele etc.

Parameters

Score

SEXUAL DESIRE	Score
No desire at all	0
Lack of desire	1
Desire but no activity	2
Desire only on demand of partner	3
Normal desire	4
Excess desire	5

Patients having genetic disorders and congenital disorders

Ethical Consideration: Ethical clearance was obtained from institutional Ethical Committee of SDM College of Ayurved, Hassan, Karnataka.

Plan of study

It was a comparative clinical study with pre-test and posttest design. About 40 patients fulfilling the criteria for inclusion were randomly studied under two groups, each comprising 20 patients.

Group A (Ashvagandha group)

In this group 3grams of *Ashvagandha Churna* was administered two times a day orally with milk for 60 days.

Group B (Basti group)

In this group *Ardha-Matrika Basti* was administered once daily for 9 day alternately. *Sthanika Abhyanga* and *Svedana* were not done before *Basti* administration. Second *Basti* course was repeated after an interval of 14 days. During this interval placebo capsule which contains sugar 500mg in powder form, one capsule twice daily was given.

Assessment

Consecutive three assessments of patients were carried out at an interval of 4th, 7th week and follow up on 15th week after the commencement of treatment.

Assessment Criteria : Semen examination was carried out in order to diagnose and to assess the effect of therapy for each follow up. Sexual Parameters: Improvement in sexual health i.e., Sexual desire, Erection, Ejaculation and Orgasm were recorded and graded as shown below.

ERECTION	
No erection by any method	0
Erection only after manipulation	1
Erection but unable to penetrate	2
Erection, initial difficulty but able to penetrate	3
Erection with occasional failure	4
Erection whenever desired	5
EJACULATION	
Ejaculation at mere thought / sight / touch of partner	0
Ejaculation during foreplay	1
Ejaculation just before penetration	2
Ejaculation after penetration but early discharge	3
Ejaculation with own satisfaction	4
Ejaculation with own and partner's satisfaction	5
ORGASM	
No enjoyment at all	0
Lack of enjoyment in most of the occasions	1
Enjoyment in only 25% of sexual encounters	2
Enjoyment in 50% of coital opportunities	3
Enjoyment in 75% of sexual intima	4
Enjoyment in every sexual act	5

OBSERVATION: A total 40 patients were enrolled in study in which 2 patients from *Ashwagandha* discontinued the treatment. Among the 40 patients 40% patients had h/o Typhoid and 25% had previous h/o U.T.I. and 05% patients had Malaria. It was found that 85% patients were taking bath with hot water, and 15% patients with cold water. Maximum that is 80% patients were wearing tight undergarments while 20% was wearing loose one. There is dominance of *Vata-Pitta Prakruti* of about 80% while 5% patients of *Vata-Kapha Prakruti* and a 15% patient belongs to *Kapha- Pitta Prakruti*. 70% patients had stress and strain. Maximum 60% patients admitted to unsatisfactory relation with their spouse. Pleasant mind is very important factor for fertility. As unsatisfactory relationship may lead to *ShukraKshaya* due to alter mental status and inversely *ShukraDusti* may lead to unsatisfactory sexual relationship. 40% patients

had left side varicocele and 15% patients had bilateral varicocele. No patient was of right side varicocele alone. Varicocele is one of the causes for oligospermia. Left testes drain directly to left renal vein in perpendicular angle which may be the cause behind more percentage of varicocele on left side and also loaded colon may impair proper emptying of blood.

RESULTS: In *Basti* group, two patients conceived, while in A group no conception. However, 10 patients showed complete remission i.e. 50% result which means normalcy of all parameters both subjective and objective. In A group 6 patients (30%) showed complete remission. In both group 20% patient showed marked improvement in major parameters. In *Basti* group 20% and A group 40% patients (8 patients) showed improvement in some parameters. Two patients did not show any improvement in A group.

Parameters	<i>Basti Group</i>		<i>Ashwagandha Group</i>	
	No. of patient	% Relief	No. of patient	% Relief

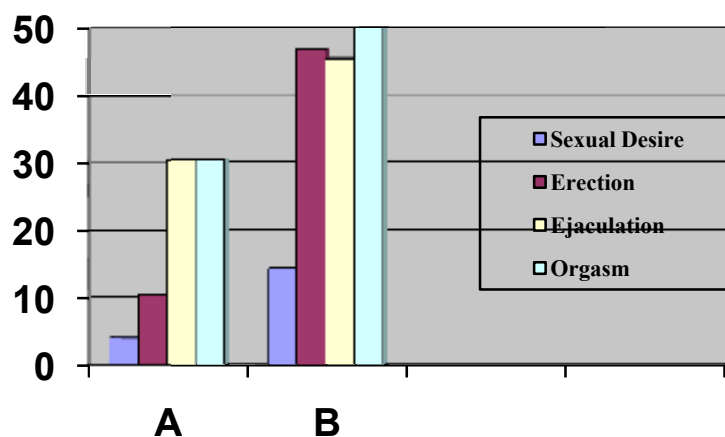
Conceived	2	10.0	0	00
Complete remission	10	50.0	6	30.0
Markedly improved	4	20.0	4	20.0
Improved	4	20.0	8	40.0
Unchanged	0	0.0	2	10.0

DISCUSSION ONEFFECT OF TREATMENT:

Effect on Sexual parameters

Ashwagandha displayed 4.14% increase in sexual desire, while Ardha-matrika Basti generated 14.29% increase. On Penile erection Ardha-matrika Basti showed 46.88% improvement which is highly significant (p<0.001).Improvement in ejaculation Ardha-matrikaBasti gave 45.45% improvement. Basti provided highly significant improvement in ejaculation in comparison to Agroup.Basti showed 50% improvementin orgasm.

Showing Improvement in Sexual parameters in %



Effect on Semen parameters

Effect of Ashvagandha on Semen Volume

Semen Volume (ml)	B.T.	Weeks of treatment		
		4th Week	7th Week	Follow up
Mean	2.39	2.53	2.66	2.83
% of change	-	5.86	11.30	18.41
S.D. (+)	-	0.15	0.26	0.21
S.E. (+)	-	0.05	0.08	0.07
t	-	2.94	3.25	4.99
p	-	< 0.02	< 0.01	< 0.001

The increase in mean semen volume on 4th week 2.53 ml as compared to 2.39 ml (B.T.) and rise by 11.3% and 18.41% on 7th and follow up. The val-

ues on 4th week and 7th week were significant, while the increase on follow up was highly significant (P<0.001).

Effect of Ardha-matrikaBasti on Semen Volume

Semen Volume (ml)	B.T.	Weeks of treatment		
		4th Week	7th Week	Follow up
Mean	2.36	2.82	2.68	3.07
% of change	-	19.49	13.56	30.08
S.D. (+)	-	0.41	0.43	0.48
S.E. (+)	-	0.13	0.13	0.15
t	-	3.51	2.33	4.66
p	-	< 0.01	< 0.05	< 0.01

Increase in mean semen volume on 4th week 2.82ml, as compared to 2.36 (B.T.) and rise by 19.49%.By 13.56% and 30.08% on 7th week and

follow up. The values on 4th week and follow up were highly significant (p <0.01), while the increase on 7th week was insignificant (P<0.05)

Effect of Ashvagandha on Total Sperm Count

Total Sperm Count (mil/ml)	B.T.	Weeks of treatment		
		4th Week	7th Week	Follow up
Mean	9.40	9.40	8.90	8.60
% of change	-	00	5.32 ↓	8.51 ↓
S.D. (+)	-	2.16	2.55	3.16
S.E. (+)	-	0.68	0.81	1.00
t	-	00	0.62	0.80
p	-	-	> 0.05	> 0.05

There was no change in 4th week. Sperm count which was decrease in mean sperm count, which was 8.9 mill/ml on 7th week, again decrease up to 8.60 mill/ml on follow up.

There was 5.32% decrease on 7th week and follow up average decrease was 8.51%. Which were statistically significant.

Effect of Ardha-matrikaBasti on total sperm count.

Total Sperm Count (mil/ml)	B.T.	Weeks of treatment		
		7 th Week	11 th Week	Follow up
Mean	8.7	11.80	13.3	17.30
% of change	-	35.63	52.87	98.85
S.D. (+)	-	2.84	3.86	4.82
S.E. (+)	-	0.90	1.22	1.36
t	-	3.44	3.76	6.28
p	-	< 0.01	< 0.01	<0.001

There was increase in mean sperm count from 8.7mil/ml to 11.8, 13.3 and 17.30 on 4th, 7th week of

treatment and follow up respectively. The values on 4th and 7th week were significant, while the increase on fol-

low up was highly significant (p<0.001)

Effect of Ashvagandha on Rapid Linear Progressive (R.L.P.) Motility

R.L.P. Motility (%)	B.T.	Weeks of treatment		
		4th Week	7th Week	Follow up
Mean	6.10	9.00	10.30	11.20
% of change	-	47.54	68.85	83.61
S.D. (+)	-	1.73	2.20	1.29
S.E. (+)	-	0.55	0.70	0.41
T	-	5.30	6.03	12.53
P	-	< 0.001	< 0.001	< 0.001

The mean RLP motility increased with treatment by 46.67% on 4th week and 68.85% on 7th week.

The value of 11.2 on follow up showed 83.61% rise. All of these values were statistically highly significant

Effect of Ardha-matrikaBasti on Rapid Linear Progressive (R.L.P.) Motility

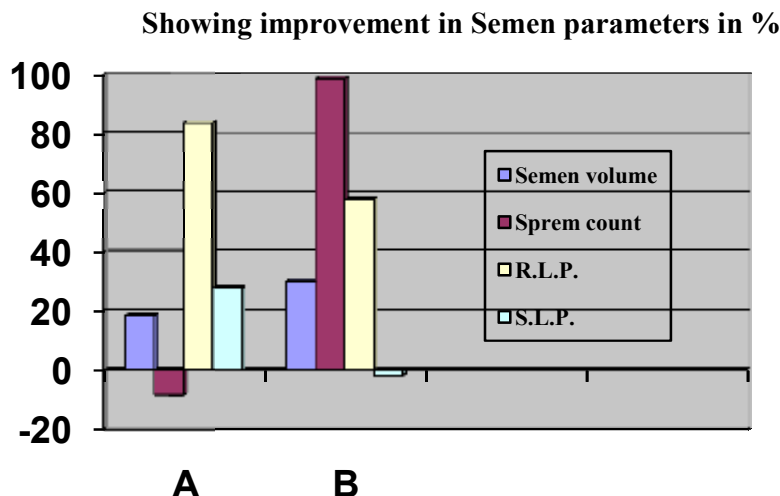
R.L.P. Motility (%)	B.T.	Weeks of treatment		
		4th Week	7th Week	Follow up
Mean	10.90	14.90	11.20	17.20
% of change	-	36.70	2.75	57.80
S.D. (+)	-	1.63	3.09	4.00
S.E. (+)	-	0.51	1.26	1.26
T	-	7.74	4.97	4.97
P	-	<0.001	<0.001	<0.001

The mean RLP motility increased with treatment by 36.7% on 4th week and 2.75% on 7th week. The value of 17.2 on follow up showed 57.8% rise. All of these values were statistically highly significant (p<0.001).

Overall effect on Semen parameter

The semen volume increased by 18.41% in A group (p<0.05) and by 30.08% in Basti group. It may be said that both the drugs are effective in increasing the semen volume significantly but the effect of the Basti was better. The sperm count on 11th week of the treatment showed 8.51% de-

crease than the initial sperm count in A group, while Basti group the count increased by 98.85%. Ashvagandha showed 83.61% increase in RLP motility while, Ardha-matrika Basti provided 57.80% increase. SLP motility was increased by 27.81% in A group, while 1.74% decreases in Basti group.



The viscosity was found to have reduced by 50% in A group and by 88.89% in Bastigroup. This can be attributed to the *Kaphahara* property in addition to *ShukraShodhaka*, and *Shothahara* properties of ingredients of Ardha- matrika- Basti.

Ashvagandha showed a minimum decrease i.e.1.43% in auto-agglutination, while *Basti* displayed remarkable reduction in agglutination i.e. 92.5%. It may be said that *Basti* showed comparatively better decrease in auto-agglutination throughout the course of the treatment. The anti-auto-agglutination effect of *Ardha-matrikaBasti* may be due to *Shothahara*, *Kapha-Vatahara*, *ShukraShodhaka* properties.

PROBABLE MODE OF ACTION: *Bruhata Pancha Mula* has the qualities like *Laghu*, *Ruksha*, *Teekshana*, *Ushna* and *UshnaVirya*. By the above qualities it may act on *Dhatvagni*. *Laghu-PanchaMoola* nourishes the *ShukraDhatu* directly due to the presence of similar qualities of *Shukra* like *Madhura Rasa*, *Snigdha*, *Pichila*, *Guru* and *Sheeta Guna*. One of the ingredients *Gokshura* has aphrodisiac action due to the presence of saponin. It stimulates increase in hormone

production and also stimulates its effect. *Madanphala* removes *ShukraDusti* by acting as *Doshahara*. It may repair the morphology and increase the motility of sperms. Honey added with *VrishyaD-ravyas* it attain the qualities of *Vrishya*. The presence of *MadhuinBasti* makes it more potent and enhances the formation *Shukra*.

CONCLUSION

Ardha-matrikaBasti provided better improvement in symptoms ejaculation, orgasm, sexual desire, penile erection and Semen parameters like semen volume, sperm count, R.L.P and Auto-agglutination as compare to *Ashwagandha*. As *Ardha-MatrikaBasti* is said to be *Shukrala*, *Balakara*, *Vrishyakara*, *Pusavanakara* and *Vatahara* this might have contributed to the improvement in *ShukraKshaya* seen in semen analysis.

LIMITATIONS: The study was limited to single geographical area and also sample size was very small.

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