



## ORIGINAL RESEARCH ARTICLE

### A CLINICAL STUDY ON EFFICACY OF SHUKRAVARDHAKA DRAVYA ON SHUKRALPATA (OLIGOSPERMIA)

GOVIND PRASAD GUPTA<sup>1</sup> RANJIP KUMAR DASS<sup>2</sup> MUKESH DUBEY<sup>3</sup> VISHNU PRASAD GAUTAM<sup>4</sup>

<sup>1</sup>Assistant Professor, Dept. of Kriya Sharir, <sup>2</sup>Assistant Professor, Dept. of Panchakarma, <sup>3</sup>Associate Professor, Dept. of Agadtantra, <sup>4</sup>Associate Professor, Dept. of Rasashastra, M.S.M. Institute of Ayurveda, B.P.S. Mahila Vishwa vidyalaya, Khanpur Kalan, Sonipat- 131001 (Haryana), India

Corresponding author email address: drranjipayu@yahoo.co.in

Access this article online: www.jahm.in

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Received on: 10/10/2013, Revised on: 30/10/2013, Accepted on: 05/11/2013

#### Abstract

##### Background:

It has been reported from various studies in the general population that now a day's Oligospermia (deficiency of sperms) is a common problem of our societies, which is due to disturb daily routine, disturb food habits, mental tensions and busyness on account of fast life. Scientists have also warned many times about the above problem.

##### Aims and Objectives:

To evaluate the efficacy of shukravardhak Dravya on Oligospermia due to various causes.

##### Methods and Materials:

14 patients and 10 volunteers were selected and their patients have different no. of Shukra divided in three groups A, B & C. Group A: had less than 100 million sperms; Group B: had more than 10 million sperms and less than 60 million; Group C: had less than 10 million sperms.

Patients were treated for one month. Laboratory test were done for volume, number, motility, number of dead sperm, natural and unnatural sperm.

**Results:** Semen Volume, Sperm Counting per Ejaculation, Viability per Ejaculation and Ejaculation Counting in Group A were higher than group B & C, which are statistically highly significant at the level of  $P > .001$ .

**Conclusion:** On the basis of the result of this study it may be concluded that the described Dravya having significant sperm count increasing effect.

**Key words:** oligospermia, semen, shukra, shukralpata, shukra Kshaya.

#### Introduction:

Now a day due to very fast life, all schedules of human beings had changed dramatically and these changes have adverse effect on shukra. The description of shukra is found in Vedas, Upnishad, Charaka samhita, Sushrut samhita and Vagbhat samhita. In Charakaa samhita, eight types of shukra Dosa<sup>1</sup>

was described and it is also described that excessive number of shukra are responsible for generation of a male child and excessive number of artava (ovum) are responsible to generate a female child<sup>2</sup>.

Now-a-days Oligospermia (deficiency of sperms) and santana heenta (no issue) are common problems due to disturb daily routine,

disturb food habits, mental tensions and busyness on account of fast life. Scientists have also warned many times about the above problem.

Shukravah srotas is a part of our body which is responsible for producing shukra. Above mentioned causes are affecting shukravah Srotas adversely. The adverse effect on Srotas generates a condition called shukra kshaya. Shukra kshaya is a condition in Ayurveda in which there is deficiency in quality and quantity of shukra responsible for santana heenta. According to modern medical science we may compare shukravaha Srotas to male reproductive system.

In Sushruta samhita, it is also described that shukra originates from Majja<sup>3</sup> (which is sixth dhatu). In Astanga Samgrah it is described that shukra is called as seventh dhatu<sup>4</sup> and responsible for establishing a Garbha. In Shshruta samhita, shukra is described as Saumya Dravya and Artava as agneya dravya<sup>5</sup>. So Soumya dravyas (mild drugs) are considered as semen promoters. Sweet and oily drugs are useful in males because they promote the origin of semen. Shukra is considered as dravya of kapha varga.

**Causes of shukra kshaya:** These are described in Charaka<sup>6</sup> and Sushruta samhita under the topic dietetic, physical causes and mental.

**Sign & Symptoms of shukra dhatu kshaya** (by Charaka samhita<sup>6</sup> & Astanga Sangraha<sup>7</sup>):

Sl No.	Drug	Latin name	Part used
1	Shatavari	<i>Asparagus racemosus</i>	Tuber
2	Ashvagandha	<i>Withania somnifera</i>	Root
3	Amla	<i>Emblica Officinalis</i>	Fruit
4	Gokshura	<i>Tribulus terrestris</i>	Fruit
5	Vidari	<i>Pueraria tuberosa</i>	Tuber

#### Ingredients of Trial Drug

Equal drug powder of each drug was mixed and then equal amount of sugar powder to that of mixed drug powder was added and after

General Debility	Impotency
Fatigue	Body ache
Feeling of Darkness	Pain & Burning in Testis
Dryness of Mouth	Incapable to do coitus
Loss of Thermal Activity	Pandu (Anemia)

#### Aims & Objectives

To evaluate the efficacy of above mentioned dravyas on shukra due to today's fast life of human beings.

#### Materials and Methods

**Selection of Patients:** 14 Patients and 10 volunteers suffering from shukranu Alpata and Santan Hinta were selected.

**Study Population:** In the OPDs and IPDs of National Institution of Ayurveda, Jaipur (Rajasthan)

**Sampling:** Simple Random sampling technique using lottery method.

**Study Setting:** The Study was carried out at OPDs and IPDs of National Institute of Ayurveda, Jaipur, Rajasthan

**Ethical Consideration:** Ethical Clearance was obtained from the Institute No. 03/1999

#### Trial Drug Details:

The details of the trial drug are as given below-

that Koko powder, 1/50th part of above prepared drug was included by 250ml of Milk and was then given with Honey and Ghee.

**Diagnostic criteria:** The diagnosis of oligospermia was made on the basis of Seminal Parameters and classical symptoms of shukra dhatu kshaya and.

**Inclusion Criteria:** Patient suffering from oligospermia having symptoms of shukra dhatu kshaya<sup>8</sup>

1. General Debility
2. Fatigue
3. Feeling of Darkness
4. Impotency
5. Dryness of mouth
6. Body ache
7. Pain and burning in testis
8. Loss of thermal activity.

**Exclusion Criteria:** Subjects are suffering from serious disease like cancer, tuberculosis, myocardial infarction, cardiac failure and life threatening arrhythmia.

- Subject with major psychiatric disorder
- Subject not ready to sign the consent and unable to comply the protocol

**Withdrawal Criteria:**

- Serious adverse events where continuation of study process serious risk to the subject
- Subject consumes any other medicine used for the treatment of oligospermia and impotency

**Sample Size:**

Number of patients planned: 24

**Safety:** Monitoring of adverse events and clinical examination.

**Interventions:**

Drug: Powder of the above mentioned drugs with sugar and koko powder:

Dose: 20 gm twice a day

Duration: One Month

Follow Up: Visit after 15 days.

**Procedure:** After recruitment, patients and volunteers were put on 30 days for Ayurveda medicine. On base line visit, medical history and physical examination were performed. An inclusion criterion was assessed and trial

treatment by shukravardhak dravya was explained. Subject was observed throughout the treatment period. After completing one month duration, subjects were advised for investigation.

**Assessment Criteria:** Findings of laboratory test (Semen Volume, Sperm Counting, Sperm Counting per Ejaculation, R.L.P. (Rapid Line Progressive Sperm), R.L.P. per Ejaculation, S.L.P. (Slow Line Progressive Sperm), N.P. (Non Progressive Sperm), N.P. Per Ejaculation, I.M.M. (Immobilized Sperm), Viability, Viability per Ejaculation, Abnormal Sperm Percentage) with sign & symptoms of shukra kshaya - General debility, fatigue, feeling of darkness, dryness of mouth, loss of thermal activity, impotency, bodyache, pain & burning in testis.

**Data Analysis:** Statistical evaluation of the data obtained was done using means, standards deviation, percentage, mean difference. Data analysis was done statistically.

**Results:**

Response to the treatment was observed, recorded and therapeutic effects were evaluated with the relief in sign & symptoms of shukra kshaya

1. Volume of shukra in Group A was higher than group B & C.
2. There is an increase in percentage of fast motile sperms and slow motile sperms in all groups.
3. Less increase in percentage of sluggish sperms in all groups.
4. Decrease in percentage of dead sperms in all groups.
5. Percentage of Prakrit sperm in group A & Group B was found increased effectively than group C. Total number of Prakrit sperms in group A & group B were also found increased effectively than group C.
6. Percentage of Aprakrit sperm decreased in group A & B than group C. Total number of Aprakrit sperms decreased in group A & B than group C

7. There is increase in percentage of shukra jivyata in group B than A & C.

8. There is no effect on shukra reaction (see table no. 1, 2, 3).

Constituents	SD	SE	't'	P	Result
Semen Volume	0.399	0.126	5.75	>.001	H.S.
Sperm Counting/ml	2.962	0.937	1.27	>.10	S.
Sperm Counting/ Ejaculation	22.3	3.16	5.96	>.001	H.S.
R.L.P (%)	5.99	1.8942	0.2639	<.10	N.S.
R.L.P. / Ejaculation Counting	13.39	4.332	3.25	± .01	S.
S.L.P.(%)	6.43	2.035	0.246	<.10	N.S.
S.L.P/ Ejaculation Counting	21.85	6.91	2.4	>.05	S.
N.P.(%)	3.69	1.167	0.43	<.10	N.S.
N.P. / Ejaculation Counting	11.22	3.55	2.25	<.05	S.
I.M.M. (%)	4.74	1.5	1	<.10	N.S.
I.M.M. / Ejaculation Counting	17.96	5.685	3.004	>.02	S.
Viability (%)	5.082	1.607	0.9334	<.10	N.S.
Viability/Ejaculation	20.72	6.56	5.92	>.001	H.S.
Normal Sperm (%)	6.93	2.45	2.24	<.05	S.
Normal Sperm/ Ejaculation Counting	22.3	7.05	5.96	>.001	H.S.
Abnormal Sperm (%)	6.93	2.45	2.24	<.05	S.
Abnormal Sperm/ Ejaculation Counting	17.59	5.56	2.48	>.05	S.

**Table No. 1: Effect of trial drug on Group A**

Constituents	SD	SE	't'	P	Result
Semen Volume	0.6116	0.216	2.45	>.05	S.
Sperm Counting/ml	5.104	1.803	0.48	<.10	N.S.
Sperm Counting/ Ejaculation	18.18	6.424	2.49	>.05	S.
R.L.P (%)	4.389	1.551	1.21	<.10	N.S.
R.L.P. / Ejaculation Counting	3.33	1.176	2.87	>.05	S.
S.L.P.(%)	5.3	1.87	1.67	<.10	N.S.
S.L.P/ Ejaculation Counting	6.28	2.22	2.64	>.05	S.
N.P.(%)	5.824	2.058	0.607	<.10	N.S.
N.P. / Ejaculation Counting	2.44	0.86	3.86	>.01	S.
I.M.M. (%)	6.852	2.41	2.6	>.05	S.
I.M.M. / Ejaculation Counting	12.54	4.43	0.75	<.10	N.S.
Viability (%)	6.82	2.41	2.59	>.05	S.
Viability/Ejaculation	9.54	3.37	3.76	>.01	S.

Normal Sperm (%)	6.93	2.45	2.24	>.05	S.
Normal Sperm/ Ejaculation Counting	9.735	3.44	4.9	>.01	S.
Abnormal Sperm (%)	6.93	2.45	2.24	>.10	S.
Abnormal Sperm/ Ejaculation Counting	13.56	4.79	1.92	>.10	S.

**Table No. 2: Effect of trial drug on Group B**

Constituents	SD	SE	't'	p	Result
Semen Volume	0.683	0.278	2.996	>.05	S.
Sperm Counting/ml	2.676	1.092	1.37	<.10	N.S.
Sperm Counting/ Ejaculation	3.8	1.55	4.22	>.01	S.
R.L.P (%)	2.16	0.882	1.51	<.10	N.S.
R.L.P. / Ejaculation Counting	0.438	0.179	1.005	<.10	N.S.
S.L.P.(%)	4.44	1.81	1.19	<.10	N.S.
S.L.P/ Ejaculation Counting	0.57	0.233	2.72	>.05	S.
N.P.(%)	2.04	0.83	1.39	<.10	N.S.
N.P. / Ejaculation Counting	0.906	0.369	1.33	<.10	N.S.
Viability (%)	4.47	1.824	1.27	<.10	N.S.
Viability/Ejaculation	1.35	0.55	2.45	>.05	S.
Normal Sperm (%)	5.11	2.09	1.99	<.10	N.S.
Normal Sperm/ Ejaculation Counting	2.23	0.91	1.92	<.10	N.S.
Abnormal Sperm (%)	5.11	2.09	1.99	<.10	N.S.
Abnormal Sperm/ Ejaculation Counting	2.92	1.19	4.03	±.01	S.
I.M.M. (%)	4.47	1.82	1.28	<.10	N.S.
I.M.M. / Ejaculation Counting	1.794	0.732	7.1	>.001	H.S.

**Table No. 1: Effect of trial drug on Group C**

It is observed that benefits were found in all symptoms of oligospermia that is in: General debility, fatigue, feeling of darkness, dryness of mouth, body ache, incapable to do coitus, anemia etc.

**Discussion:** Comparative data analysis revealed that the 'P' Value in all seminal parameters was significant. The Semen Volume, Sperm Counting per Ejaculation, Viability per Ejaculation and Ejaculation Counting in Group A were higher than group B & C, which are statistically highly

significant at the level of  $P > .001$ . And it is also observed that the symptoms of shukra kshaya were relieved effectively by using these dravya. The results are encouraging and support the classical claim that dravya studied is effective in reducing the symptoms of shukra kshaya. All drugs are shukrala (semen enhancing) described in samhitas. All dravyas except Ashvagandha are soumya dravya and shukra promoters. Anupana milk is also shukrala and promotes shukra, because milk is madhura and snigdha. As per Modern Science

mostly drugs are antioxidant, anti-sterility, Aphrodisiac and increase the quality & viability of sperm.

**Conclusion:** It is concluded that the formulations studied in this study are effectively changes the laboratory findings of semen and also relieve the symptoms of shukra kshaya.

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Cite this article as: Govind Prasad G, Ranjip Kumar D, Mukesh D, Vishnu P.G., A clinical study on efficacy of shukravardhaka dravya on shukralpata (oligospermia), Journal of Ayurveda and Holistic Medicine; 2013;1(8): 1-6

Source of support: Nil, Conflict of interest: None Declared.