

RELATIONSHIP BETWEEN *SHUKRA SARA PURUSHA* WITH QUALITY OF SEMEN: AN PILOT STUDY

Abstract

Dhatu sarata is an excellent state for any particular *dhatu*. *Shukra dhatu* is one of the seven *dhatu* reflects reproductive health. *Garbhotpadan* (reproduction) is main function of *Shukra Dhatu*. Characteristics future of *shukra* is given by *ayurvedacharya* and this quality of *shukra* said to be best for fertility. *Shukta Dhatu* can be correlated with semen. Its quality and quantity affects reproduction and any deformity is lead to infertility in male. Pilot study was conducted to find out relationship between *Shukta dhatu sarata* and quality of semen. An observational pilot study conducted on apparently healthy volunteers. 30 male volunteers of age group 25-35 yr were selected and their *Shukra dhatu sarata* were assessed with standard proforma. Then categorized into *Uttam* , *Madhayama* & *Hina* sara on the basis of presence number of characteristics . Semen analysis i.e. Total sperm count, semen volume, sperm motility is done in laboratory of same individuals. Higher Sperm count, good Sperm motility and high semen volume are found in *Uttam Shukra dhatu sara* individuals as compare to *hina shukrasara* individuals. It is not possible to come to any conclusion as this was pilot study. Further study should be conducted on large sample size.

Keywords: Shukra Dhatu, Shukra *dhatu sarata*, semen analysis, Semen volume, sperm motility, sperm count

1. Introduction

Dhatu sarata reflects qualitative and functional status of *dhatu*.¹ In Ayurveda, characteristics of each *dhatu sarata* is mentioned and it shows excellent state of same *dhatu*. *Garbhotpadan* (reproduction) is main function of *Shukra Dhatu*.² Some quality of *Shukra dhatu* is mentioned i.e. *Streepriya* (liking by opposite gender) *StreeUpbhoga*, (enjoy sexual activities) *Balavant* (having good strength) *Apatyabhaj* (good progeny)³. Quality of semen is very much essential for conception and healthy progeny. Any type of deformity in semen (volume, count, motility of sperm) leads to infertility in male. Further is lead to stressful situation in married life. Pilot study was conducted to find out relationship between *Shuktadhatusarata* and quality of semen. Pilot study was conducted to find out relationship between *Shuktadhatusarata* and quality of semen.

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2. Aim & Objectives

- To find relationship between *Shukra Sara Purusha* and quality of semen
- To Assess *Shukradhatu sarata* in apparently healthy Individuals with Proforma without any modification
- To assess semen analysis (semen volume sperm count and sperm motility) of different *shukradhatu sarata* individuals.

3. MATERIAL AND METHOD

This observational pilot study was conducted on 30 healthy male volunteers of different *Shukradhatusara* to analysis quality of semen.

3.1 **Sampling technique** – purposive sampling

3.2 **Sample size** – 30

3.3 **Selection Criteria**

Inclusion Criteria

- Apparently healthy male volunteers.
- Age between 25 to 30 years

Exclusion Criteria

- Individuals having any diagnosed systemic disorders and on medication for the same.
- Individual not living together with their sexual partner

3.4 **Parameter of assessment**

Subjective: Shukradharu sarata⁴

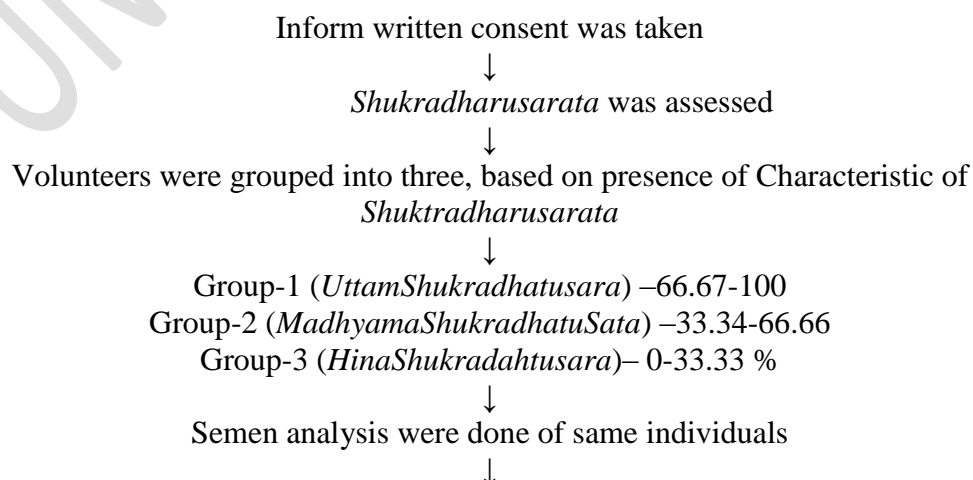
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- *Shukradharusarata* was assessed with standard proforma.

Objective: Semen analysis

- It is done in laboratory.
- **Collection of semen:** volunteer must has to abstinence of at least 3 days, sample is collected by masturbation method in dry, sterile, plastic container. Semen volume, Sperm count and Sperm motility are analyzed

3.5 **Study Design**



Analysis of data

4. Observations

A total of 30 male volunteers participated in the study.

Table 1- Age of volunteers

Age group(Yr)	5. No. Individuals	Of	percentage
25-30	18		60
31-35	12		40
Total	30		100

Table 2 Shukra Dhatu sara Parikshana

Types of Sarata	Score	Subjects	percentage
Uttama	13-19	11	36.66
Madhayama	7-12	10	33.34
Hina	0-6	9	30

Table 3- Semen volume in Different *Shukradhatu*sara Individuals

Types of Sarata	Average Semen volume per ejaculation	Total
Uttama	4.79 ml	11
Madhayama	3.52 ml	10
Hina	2.3 ml	9

Table 4- Sperm count in Different *Shukradhatu*sara Individuals

Types of Sarata	Average Sperm count(million /ml)	Total
Uttama	98.18	11
Madhayama	62.2	10
Hina	26.55	9

Table 5- Sperm motility in Different *Shukradhatu*sara Individuals

Types of Sarata	Average Sperm motility (%)	Total
Uttama	74.72	11
Madhayama	55.9	10
Hina	38.89	9

Statistical Analysis & Result

Parsons's correlation test was applied to know relationship between relationship between *shukrasara purusha* with quality of semen

Table 6- Characteristics of *Shukradhatusara* and Semen volume correlation

Characteristics of <i>Shukradhatusara</i> and Semen volume	X	Y	N	r	P-Value
	10.2	3.62	30	0.9218	0.00001.

The result is significant at $p < .01$ this is a strong positive correlation, which means that high Characteristics of *Shukradhatusara* go with high Semen volume (and vice versa).

Table 7- correlation of Characteristics of *Shukradhatusara* and sperm count

Characteristics of <i>Shukradhatusara</i> and Sperm count	X	Y	N	r	P-Value
	10.2	64.7	30	0.9116	< .00001

The result is significant at $p < .01$ This is a strong positive correlation, which means that high Characteristics of *Shukradhatusara* go with high Sperm volume (and vice versa).

Table 8- correlation of Characteristics of *Shukradhatusara* and sperm motility

Characteristics of <i>Shukradhatusara</i> and Sperm motility	X	Y	N	r	P-Value
	10.2	57.7	30	0.9412	< .00001

The result is significant at $p < .01$ This is a strong positive correlation, which means that high Characteristics of *Shukradhatusara* go with high Sperm motility (and vice versa).

5. Discussion

Discussion on Shukra dhatu & Shukradhatusara

- The substance which comes out during coitus is '*Retas*' (Shukra).
- Principle organs of *Shukra Vaha Strotasa* i.e. Shukra Dhatu are testes and penis.⁵ *Shukra Dhatu* is present in whole body. Seventh '*Kala*' is '*Shukradhara Kala*⁷ which is present all over the body but it is particularly located at the distance of two '*Angula*'

laterally to the right side of 'Bastidwara' (bladder) & 'Mutramarga' (urethra and penis).⁶

- By the active participation of 'Panchamahabhuta' Sapt Dhatu utpatti takes place. Shukra Dhatu is formed at the last stage as follows, 'Agni' digests the 'Majjadhatu' present in hollow spaces of 'Asthidhatu' and formation of 'Soma' Gunatmaka Shukradhatu occurs.⁷ It takes one month for generation of Shukra.⁸ By the special action milk is turned immediately into Shukra.
- Shukra is Soumya, Avidahi (Cool), Drava (fluid), Shweta (white), Sphatikasannibha, smelling like honey, Picchila (slimy), Bahala (abundant) and its color is like oil or honey. Such semen is supposed to be fertile. Extreme 'Snigdha' Guna is chief property of Shukra is capable of offering strength to the body.⁹
- Principle function of Shukradhatu is Garbhotpadana (reproduction). It gives courage to person. Further it has functions –Chyavan (get ejaculated smoothly during intercourse), Priti (creates softness in mind), Dehabala (strength to the body) and Harsha (arouse man for reproduction).¹⁰
- Shukrasara individual are mild looking pleasant to look, Their eyes are as if filled by milk, always happy, their teeth are set equally, are of Snigdha Guna (unctuous) look round, close to each other, their voice and color is pleasant, Snigdha. Their pelvic region is broad and they are dear to females. They enjoy females. They are strong, achieve happiness, wealth, health, money, felicitation and children.¹¹
- These individual have Snigdha, Samahata, white teeth and nails. They have strong sex desires and are fertile.¹²

Discussion on Semen Analysis

Semen:

Semen is a white or gray fluid that contains spermatozoa. It is the collection of fluid from testes, seminal vesicles, prostate gland & bulbourethral glands. Semen is discharged during sexual act and the process of discharge of semen is called ejaculation. Testis contributes sperms. The prostate secretion gives milky appearance to semen. And the secretion gives milky appearance to semen. And the secretions from seminal vesicle and Bulbourethral glands provide mucoid consistency to semen. At the time of ejaculation, human semen is liquid in nature. Immediately it coagulates and after some time it undergoes a secondary liquefaction. The fibrinogen secreted by seminal vesicle is converted into a weak coagulum by the clotting enzymes, Secreted by the prostate gland. The coagulum is liquefying after about 30 minutes as it lysed by fibrinolysin. Fibrinolysin is the activated form of profibrinolysin produce from prostate gland. When semen ejaculates; the sperm are non-motile due to the viscosity of the coagulum. When coagulum dissolves, the sperms become motile.¹³

Properties of semen¹⁴:-

- Specific gravity -1.028.
- Volume-2-6 ml. per ejaculation.
- Reaction – it is alkaline with ph of 7.5. The alkalinity is due to the secretion from prostate gland.

Composition of semen¹⁵:-

Semen contains 10% sperms and 90% of fluid part which is called seminal plasma. The seminal plasma contains the product from seminal vesicle and prostate gland. It also has small number of secretions from the mucus glands, particularly the Bulbourethral gland.

Semen examination is an integral part of the evaluation of the infertility. As a result of relative simplicity semen examination is often requested before the complicated and expensive examinations of females. Repeat examination should be done if once it is found to be abnormal.

Table 9-World Health Organization Reference Values for Semen Analysis Testing¹⁶

Does not match with the recent last two Edition of WHO Criteria (2010 & 2021)

Volume	> 2 mL
Sperm concentration	> 20 million/mL
Sperm number	> 40 million per ejaculate
Sperm motility	> 50% progressive or > 25% rapidly progressive
Morphology (strict criteria)	> 15% normal forms
White blood cells	< 1 million/mL
Vitality	≥ 75% living
pH	≥ 7.2
Liquification time	< 60 minutes

Table 10:- Classification of semen quality¹⁷

Semen parameter	Normal Quality	Marginal quality	Abnormal quality
Semen volume(ml.)	2-5	1-2	<1
Sperm motility (%)	>50	40-50	<40
Sperm concentration. (mill/ml)	20-250	10-20	<10

Discussion on Statistical analysis and Result

Parsons's correlation test was applied to know relationship between relationships between *shukrasara purusha* with quality of semen i.e. Semen volume, sperm count & sperm motility

Test is significant there is relationship between characteristics of Shukradhatusara & Semen volume, sperm count & sperm motility.

As I have discussed earlier, *Dhatusarata* is reflection of good quality and function of that dhatu. Quality and function of *shukra* dhatu is seen in the form of *sarata* also in the form of quality of semen. Good quality of semen is seen in *Uttamashukrasara* individuals.

4. Conclusion

- Average Semen volume in uttam, madhyam & hina Shukrasara individual is **4.79 ml, 3.52 ml & 2.3 ml** respectively
- Average Sperm count in uttam, madhyam & hina Shukrasara individual is **98.18 million /ml, 62.2 million /ml & 26.55 million /ml** respectively
- Sperm motility in uttam, madhyam & hina Shukrasara individual is **74.72%, 55.9%, & 38.89%** respectively
- **There is significant relationship between** characteristics of *Shukradhatusara* & Semen volume, sperm count & sperm motility.

NOTE:

The study highlights the efficacy of " Ayurveda " which is an ancient tradition, used in some parts of India. This ancient concept should be carefully evaluated in the light of modern medical science and can be utilized partially if found suitable.

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