

# A RANDOMIZED OPEN-LABEL CONTROLLED CLINICAL STUDY TO EVALUATE THE EFFICACY OF MASHA PAAYASA IN THE MANAGEMENT OF KSHEENASHUKRA WITH SPECIAL REFERENCE TO OLIGOSPERMIA

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## Abstract:

**Context:** Infertility affects 8%–12% of couples worldwide, with male factors contributory in over 50% of cases. *Ksheena Shukra* is an Ayurvedic condition involving qualitative and quantitative vitiation of *Shukra Dhātu*, comparable to modern Oligospermia.

**Objective:** To evaluate and compare the efficacy of *Masha Paayasa* (trial drug) against *Vidaryadi Choorna* (controlled drug) in the management of *Ksheena Shukra*.

**Methodology:** A randomized, open-label, parallel-controlled clinical study was conducted with 30 subjects (15 per group) for a drug trial period of 45 days. Group A received *Masha Paayasa*, and Group B received *Vidaryadi Choorna*.

**Results:** Both interventions were safe and efficacious. Group A showed a **67% overall improvement**, while Group B showed a **61% overall improvement**.

**Conclusion:** *Masha Paayasa* is significantly more effective than *Vidaryadi Choorna* in improving seminal parameters and subjective symptoms of *Ksheena Shukra*.

## INTRODUCTION

Ayurveda defines the utility of science as maintaining the health of the healthy and curing the diseased. *Vajikarana* (Aphrodisiac therapy) is the branch of Ayurveda dedicated to managing infertility and regaining potency.

*Ksheena Shukra* manifests when vitiated *Vata* and *Pitta* derange the normal quality and quantity of *Shukra Dhātu*. In modern medicine, this corresponds to **Oligospermia**, where sperm count falls below the normal range. Factors such as stress, lifestyle changes, and dietary hazards contribute to the rising incidence of male infertility.

**Need For Study:** Male factors are solely liable for infertility in approximately 20% of cases. While many Ayurvedic treatments exist, there is a need for effective *Shamana* (palliative) therapies like *Masha Paayasa* that can be administered easily at an OPD level without laborious *Shodhana* procedures.

## INTERVENTION

### Group A: Masha Paayasa (Trial Drug)

- **Source:** *Chakradutta*.
- **Ingredients:** *Masha* (*Phaseolus mungo* Linn), *Dugdha* (Milk), and Ghee.
- **Properties:** Predominantly *Madhura Rasa*, *Guru-Snigdha Guna*, and *Sheeta Virya*. It possesses *Balya*, *Brimhana*, and *Vrushya* actions.

**Group B: Vidaryadi Choorna (Controlled Drug)**

- **Ingredients:** *Vidarikand, Shwet Musli, Salampanja, Ashwagandha, Gokshura, and Akarkarabha* in equal parts.
- **Properties:** Most ingredients are *Madhura, Sheeta, and Vata-Pitta Shamaka*, providing *Shukrala* and *Rasayana* effects.

**MATERIALS AND METHODS**

**Source of Data:** 30 male patients aged 25–45 years were selected from the OPD and IPD of JIAR Hospital, Jammu.

**Study Design:** Randomized, open-label, parallel-group, pre- and post-test clinical study.

- **Sample Size:** 30 subjects (15 per group).
- **Randomization:** Done by chits.
- **Trial Duration:** 45 days (30 days drug trial + 15 days follow-up).

**Inclusion Criteria:**

1. Pratyatma Lakshana of *Ksheena Shukra* (e.g., *Klaibyam, Maithuna ashakti*).
2. Sperm count less than 15 million/ml.

**Exclusion Criteria:** Aspermia, Klinefelter’s syndrome, Varicocele, STDs, or chronic systemic diseases like DM.

**Assessment Criteria:**

- **Subjective:** Sexual desire (libido), Erection, Orgasm, and Ejaculatory control.
- **Objective:** Semen analysis (Count, pH, Morphology, Vitality, Motility).

**OBSERVATIONS AND RESULTS**

**Demographics:** In Group A, 60% of patients were in the 36–45 age group, while 73% of Group B were 25–35 years old. All patients (100%) in both groups were married.

**ALL COMBINED RESULTS IN ONE TABLE**

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Group A	SEXUAL DESIRE PREINTERVENTION	.47	15	.516	.133
	SEXUAL DESIRE POSTINTERVENTION	2.47	15	.640	.165
Group A	ERECTION PREINTERVENTION	.53	15	.743	.192
	ERECTION POSTINTERVENTION	2.73	15	.458	.118
Group A	ORGASM PREINTERVENTION	.47	15	.743	.192
	ORGASM POSTINTERVENTION	2.40	15	.507	.131
GROUP A	EJACULATORY CONTROL PREINTERVENTION	.73	15	.594	.153
	EJACULATORY CONTROL POSTINTERVENTION	2.60	15	.507	.131
Group A	APPEARENCE OF SEMEN PREINTERVENTION	1.00	15	.655	.169
	APPEARANCE OF SEMEN POSTINTERVENTION	1.87	15	.352	.091
Group A	SPERM COUNT PREINTERVENTION	19.00	15	5.632	1.454
	SPERM COUNT POSTINTERVENTION	46.80	15	8.637	2.230
Group A	PH OF SEMEN PREINTERVENTION	6.11	15	1.062	.274
	PH OF SEMEN POSTINTERVENTION	7.53	15	.215	.056
Group A	MORPHOLOGY PREINTERVENTION	.24	15	.080	.021

	MORPHOLOGY POSTINTERVENTION	.68	15	.130	.034
Group A	VITILITY PREINTERVENTION	.19	15	.059	.015
	VITILITY POSTINTERVENTION	.62	15	.085	.022
Group A	MOTILITY PREINTERVENTION	.18	15	.070	.018
	MOTILITY POSTINTERVENTION	.54	15	.043	.011
Group B	SEXUAL DESIRE PREINTERVENTION	.07	15	.258	.067
	SEXUAL DESIRE POSTINTERVENTION	1.87	15	.640	.165
Group B	ERECTION PREINTERVENTION	.67	15	.488	.126
	ERECTION POSTINTERVENTION	1.93	15	.594	.153
Group B	ORGASM PREINTERVENTION	.67	15	.617	.159
	ORGASM POSTINTERVENTION	1.67	15	.617	.159
Group B	EJACULATORY CONTROL PREINTERVENTION	.93	15	.594	.153
	EJACULATORY CONTROL POSTINTERVENTION	2.07	15	.594	.153
Group B	APPEARENCE OF SEMEN PREINTERVENTION	1.40	15	.507	.131
	APPEARANCE OF SEMEN POSTINTERVENTION	1.87	15	.352	.091
Group B	SPERM COUNT PREINTERVENTION	23.87	15	7.539	1.947
	SPERM COUNT POSTINTERVENTION	73.60	15	124.257	32.083
Group B	PH OF SEMEN PREINTERVENTION	6.47	15	.963	.249
	PH OF SEMEN POSTINTERVENTION	7.31	15	.281	.073
Group B	MORPHOLOGY PREINTERVENTION	.25	15	.083	.021
	MORPHOLOGY POSTINTERVENTION	.58	15	.122	.031
Group B	VITILITY PREINTERVENTION	.18	15	.058	.015
	VITILITY POSTINTERVENTION	.50	15	.069	.018
Group B	MOTILITY PREINTERVENTION	.20	15	.076	.020
	MOTILITY POSTINTERVENTION	.47	15	.078	.020

Paired Samples Test										
		Paired Differences					df	Sig. (2-tailed)	Sig.	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Group A	SEXUAL DESIRE PREINTERVENTION	-2.000	.845	.218	-2.468	-1.532	-9.165	14	.000	H.S
	SEXUAL DESIRE POSTINTERVENTION									
Group A	ERECTION PREINTERVENTION	-2.200	.775	.200	-2.629	-1.771	-11.000	14	.000	H.S
	ERECTION POSTINTERVENTION									
Group A	ORGASM PREINTERVENTION	-1.933	.704	.182	-2.323	-1.544	-10.640	14	.000	H.S
	ORGASM POSTINTERVENTION									

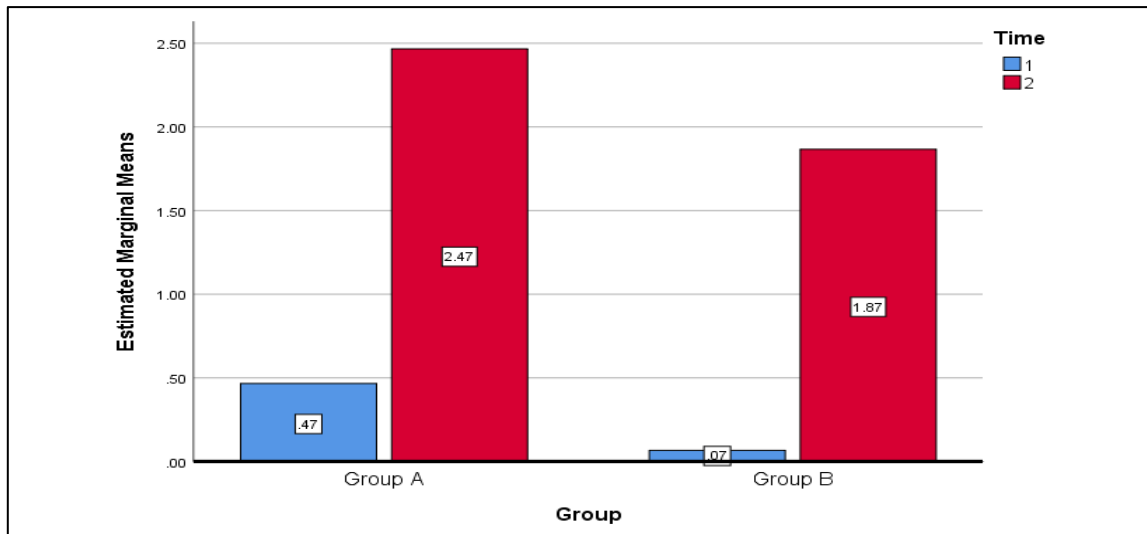
Group A	EJACULATORY CONTROL PREINTERVENTION	-1.867	.516	.133	-2.153	-1.581	-14.000	14.000	H.S
Group A	EJACULATORY CONTROL POSTINTERVENTION								
Group A	APPEARENCE OF SEMEN PREINTERVENTION	-.867	.743	.192	-1.278	-.455	-4.516	14.000	H.S
Group A	APPEARANCE OF SEMEN POSTINTERVENTION								
Group A	SPERM COUNT PREINTERVENTION	-27.800	6.614	1.708	-31.463	-24.137	-16.279	14.000	H.S
Group A	SPERM COUNT POSTINTERVENTION								
Group A	PH OF SEMEN PREINTERVENTION - PH OF SEMEN	-1.413	1.052	.272	-1.996	-.831	-5.203	14.000	H.S
Group A	PH OF SEMEN POSTINTERVENTION								
Group A	MORPHOLOGY PREINTERVENTION	-.441	.115	.030	-.505	-.377	-14.795	14.000	H.S
Group A	MORPHOLOGY POSTINTERVENTION								
Group A	VITILITY PREINTERVENTION	-.429	.111	.029	-.491	-.368	-15.041	14.000	H.S
Group A	VITILITY POSTINTERVENTION								
Group A	MOTILITY PREINTERVENTION	-.359	.080	.021	-.403	-.314	-17.289	14.000	H.S
Group A	MOTILITY POSTINTERVENTION								
Group B	SEXUAL DESIRE PREINTERVENTION	-1.800	.676	.175	-2.174	-1.426	-10.311	14.000	H.S
Group B	SEXUAL DESIRE POSTINTERVENTION								
Group B	ERECTION PREINTERVENTION	-1.267	.799	.206	-1.709	-.824	-6.141	14.000	H.S
Group B	ERECTION POSTINTERVENTION								
Group B	ORGASM PREINTERVENTION	-1.000	.756	.195	-1.419	-.581	-5.123	14.000	H.S
Group B	ORGASM POSTINTERVENTION								
Group B	EJACULATORY CONTROL PREINTERVENTION	-1.133	.352	.091	-1.328	-.938	-12.475	14.000	H.S
Group B	EJACULATORY CONTROL POSTINTERVENTION								

Group B	APPEARENCE OF SEMEN PREINTERVENTION APPEARANCE OF SEMEN POSTINTERVENTION	-.467	.516	.133	-.753	-.181	-3.500	14	.004	S
Group B	SPERM COUNT PREINTERVENTION SPERM COUNT POSTINTERVENTION	-49.733	121.112	31.271	-116.803	17.336	-1.590	14	.134	N.S
Group B	PH OF SEMEN PREINTERVENTION - PH OF SEMEN POSTINTERVENTION	-.833	.800	.206	-1.276	-.390	-4.036	14	.001	H.S
Group B	MORPHOLOGY PREINTERVENTION MORPHOLOGY POSTINTERVENTION	-.321	.099	.025	-.376	-.267	-12.619	14	.000	H.S
Group B	VITILITY PREINTERVENTION VITILITY POSTINTERVENTION	-.319	.090	.023	-.369	-.269	-13.688	14	.000	H.S
Group B	MOTILITY PREINTERVENTION MOTILITY POSTINTERVENTION	-.264	.099	.026	-.319	-.209	-10.307	14	.000	H.S

**A MIXED-DESIGN ANOVA WAS CONDUCTED TO EXAMINE THE EFFECT OF TIME (PRE VS. POST) AND GROUP (GROUP A VS. GROUP B) ON THE OUTCOME VARIABLE.**

**1. SEXUAL DESIRE**

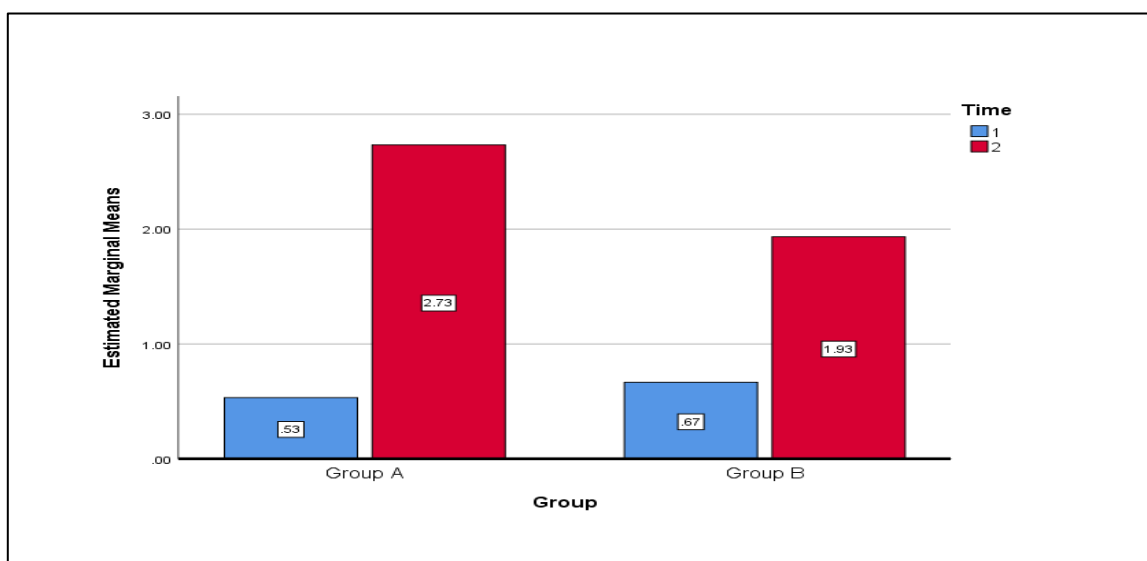
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.4667	.51640	15
	Group B	.0667	.25820	15
	Total	.2667	.44978	30
Post	Group A	2.4667	.63994	15
	Group B	1.8667	.63994	15
	Total	2.1667	.69893	30



For sexual desire, both Group A and Group B showed an increase from the pre-test to the post-test. Group A's mean score increased from 0.47 to 2.47, while Group B's mean score increased from 0.07 to 1.87. After the intervention, Group A had a higher mean score than Group B. The difference in the means between the groups was statistically significant

## 2. ERECTION

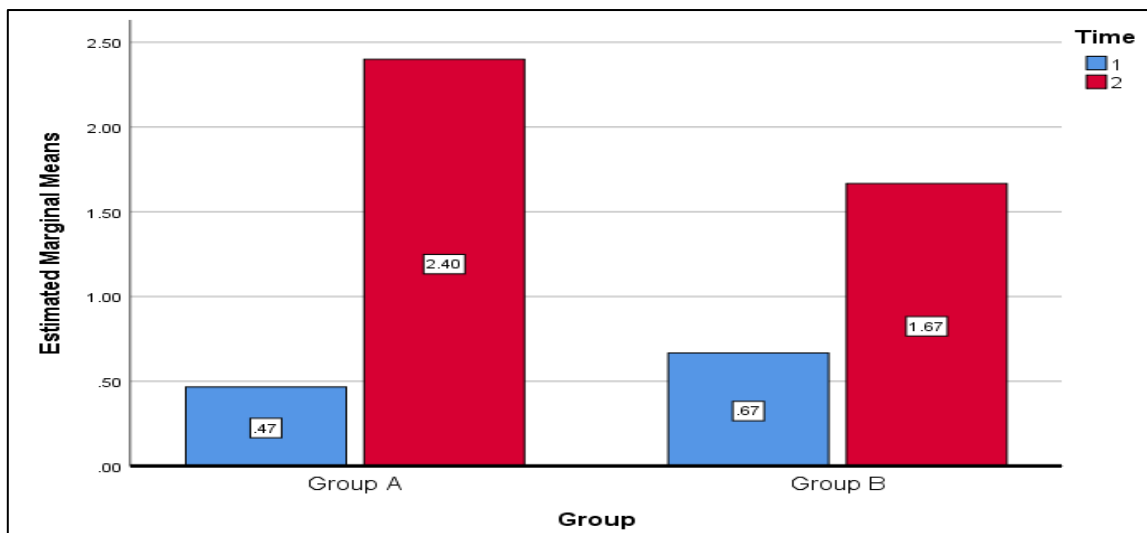
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.5333	.74322	15
	Group B	.6667	.48795	15
	Total	.6000	.62146	30
Post	Group A	2.7333	.45774	15
	Group B	1.9333	.59362	15
	Total	2.3333	.66089	30



For Erection, both Group A and Group B had an increase in their mean scores after the intervention. Group A's mean score went from 0.53 to 2.73, and Group B's mean score went from 0.67 to 1.93. Following the intervention, Group A's mean score was higher than Group B's. The difference between the groups was statistically significant

### 3. ORGASM

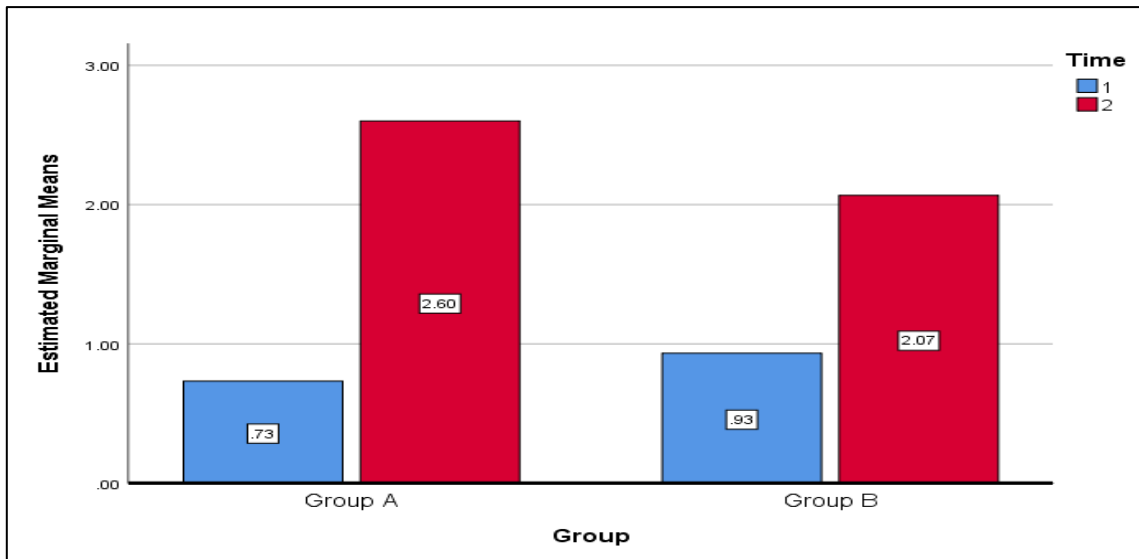
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.4667	.74322	15
	Group B	.6667	.61721	15
	Total	.5667	.67891	30
Post	Group A	2.4000	.50709	15
	Group B	1.6667	.61721	15
	Total	2.0333	.66868	30



For Orgasm, both groups showed an increase in mean scores from the pre-test to the post-test. Group A's mean score increased from 0.47 to 2.40, and Group B's mean score increased from 0.67 to 1.67. After the intervention, Group A had a higher mean score. However, the difference between the groups was not statistically significant

### 4. EJACULATORY CONTROL

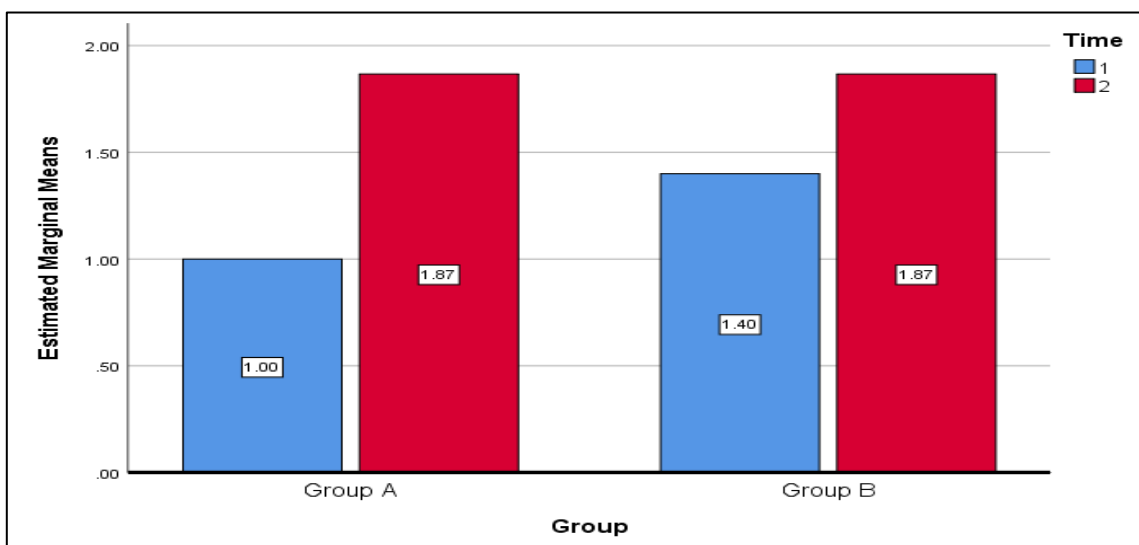
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.7333	.59362	15
	Group B	.9333	.59362	15
	Total	.8333	.59209	30
Post	Group A	2.6000	.50709	15
	Group B	2.0667	.59362	15
	Total	2.3333	.60648	30



For Ejaculatory control, both Group A and Group B had higher mean scores after the intervention. Group A's mean score increased from 0.73 to 2.60, and Group B's mean score increased from 0.93 to 2.07. Group A's post-intervention mean score was higher than Group B's. The difference between the groups was not statistically significant.

### 5. SPERM COUNT

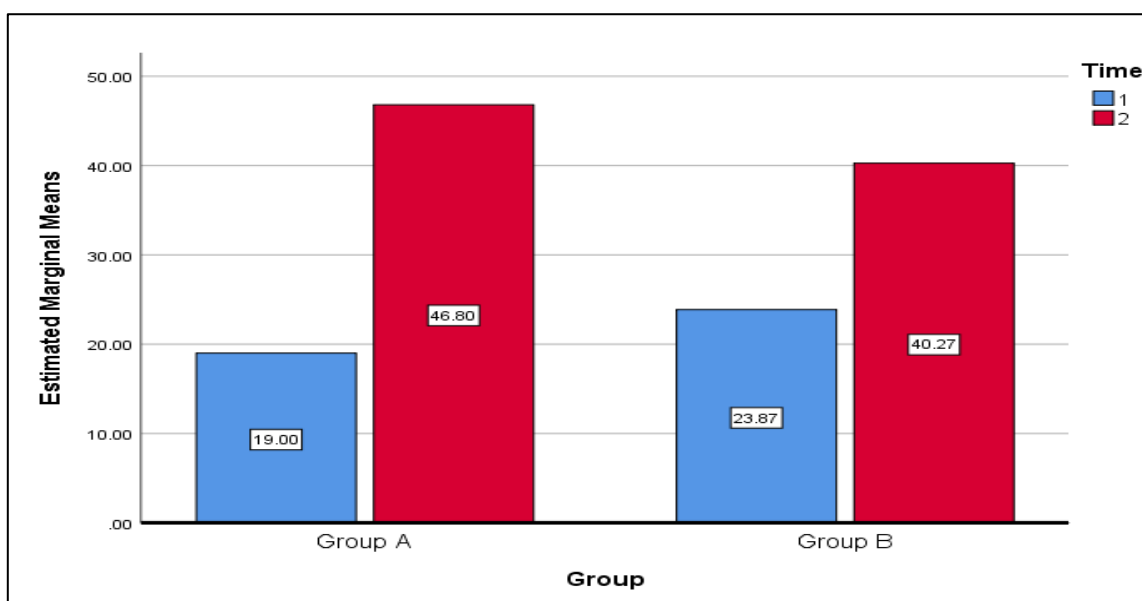
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	1.0000	.65465	15
	Group B	1.4000	.50709	15
	Total	1.2000	.61026	30
Post	Group A	1.8667	.35187	15
	Group B	1.8667	.35187	15
	Total	1.8667	.34575	30



For sperm count, the mean scores for both groups increased from the pre-test to the post-test. Group A's mean score increased from 1.00 to 1.87, and Group B's mean score increased from 1.40 to 1.87. Both groups had the same mean score after the intervention. The difference between the groups was not statistically significant.

### 6. APPEARANCE OF SEMEN

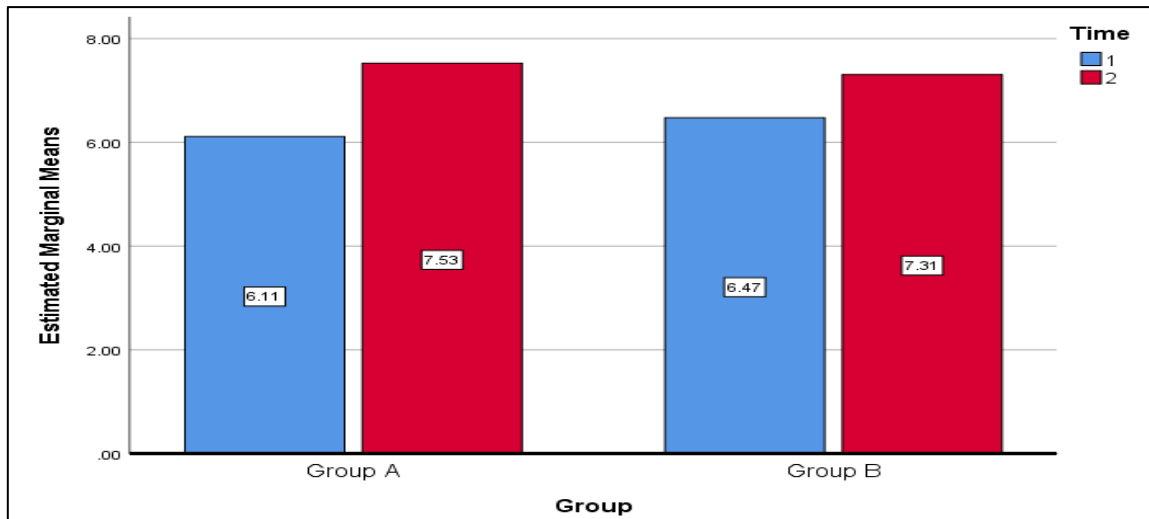
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	19.0000	5.63154	15
	Group B	23.8667	7.53910	15
	Total	21.4333	6.99105	30
Post	Group A	46.8000	8.63713	15
	Group B	40.2667	8.82745	15
	Total	43.5333	9.20170	30



For appearance of semen, the mean scores for both groups increased after the intervention. Group A's mean score went from 19.00 to 46.80, and Group B's mean score went from 23.87 to 40.27. Post-intervention, Group A's mean score was higher than Group B's. The difference between the groups was not statistically significant

### 7. PH OF SEMEN

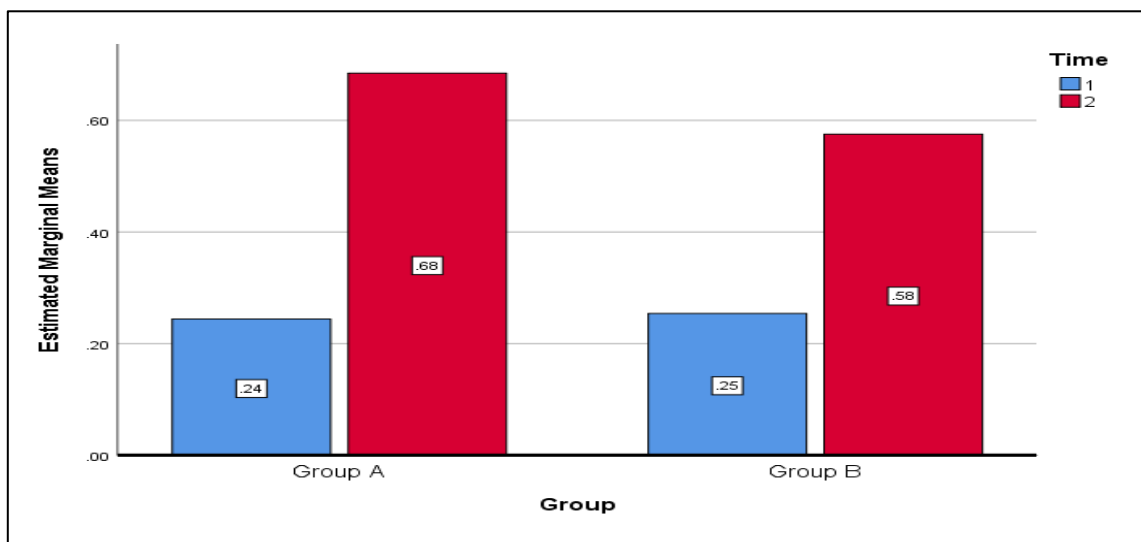
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	6.1133	1.06225	15
	Group B	6.4733	.96323	15
	Total	6.2933	1.01300	30
Post	Group A	7.5267	.21536	15
	Group B	7.3067	.28149	15
	Total	7.4167	.27048	30



For PH of semen, both Group A and Group B showed an increase in their mean scores after the intervention. Group A's mean score increased from 6.11 to 7.53, while Group B's mean score increased from 6.47 to 7.31. After the intervention, Group A had a slightly higher mean score. The difference between the groups was not statistically significant.

### 8. MORPHOLOGY

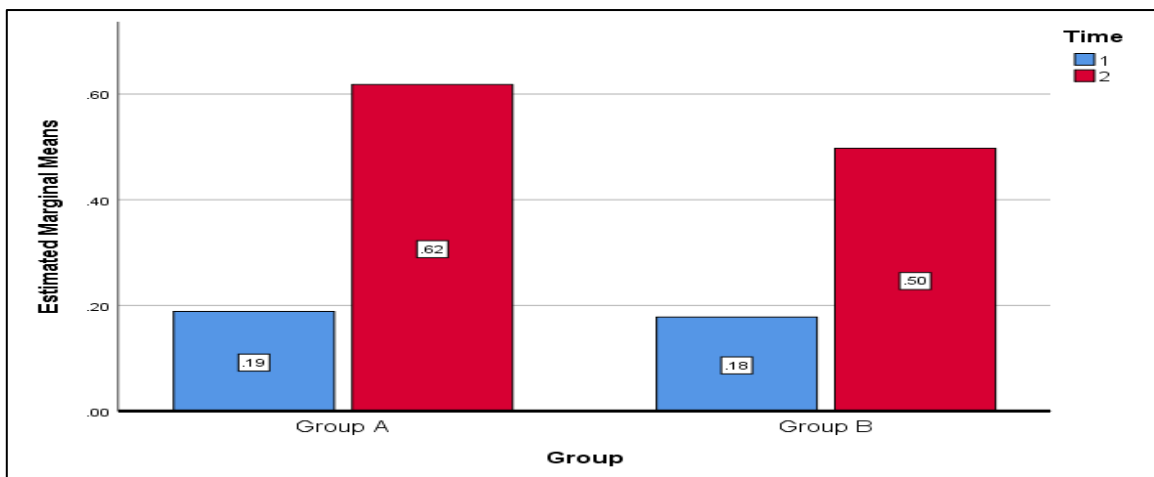
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.2440	.07962	15
	Group B	.2540	.08305	15
	Total	.2490	.08010	30
Post	Group A	.6847	.13016	15
	Group B	.5753	.12188	15
	Total	.6300	.13580	30



For morphology, both groups showed an increase in mean scores from the pre-test to the post-test. Group A's mean score increased from 0.24 to 0.68, while Group B's mean score increased from 0.25 to 0.58. Post-intervention, Group A's mean score was higher. The difference between the groups was not statistically significant.

### 9. VITILITY

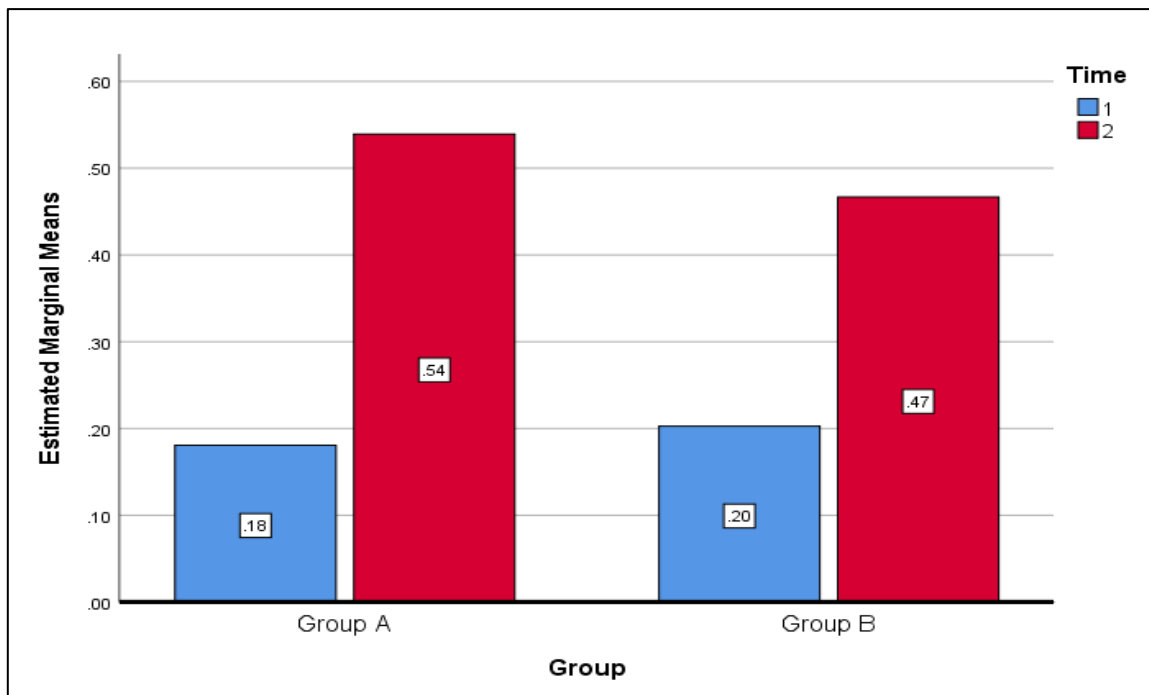
Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.1887	.05914	15
	Group B	.1780	.05784	15
	Total	.1833	.05774	30
Post	Group A	.6180	.08529	15
	Group B	.4973	.06923	15
	Total	.5577	.09793	30



For vitility, both groups had higher mean scores after the intervention. Group A's mean score increased from 0.19 to 0.62, and Group B's mean score increased from 0.18 to 0.50. After the intervention, Group A's mean score was higher than Group B's. The difference between the groups was statistically significant

### 10. MOTILITY

Descriptive Statistics				
	Group	Mean	Std. Deviation	N
Pre	Group A	.1807	.06995	15
	Group B	.2027	.07573	15
	Total	.1917	.07250	30
Post	Group A	.5393	.04267	15
	Group B	.4667	.07835	15
	Total	.5030	.07217	30



For Motility, both Group A and Group B showed an increase in their mean scores after the intervention. Group A's mean score increased from 0.18 to 0.54, while Group B's mean score increased from 0.20 to 0.47. After the intervention, Group A's mean score was higher than Group B's. However, the difference between the groups was not statistically significant.

**COMPARATIVE ANALYSIS OF GROUP A AND GROUP B**

Paired Samples Statistics							
		Mean	N	Std. Deviation	Std. Error Mean	t-statistic	P – value
SEXUAL DESIRE	Group A	2.47	15	.640	.165	2.073	0.057
	Group B	1.87	15	.640	.165		
ERECTION	Group A	2.73	15	.458	.118	4.583	0.00
	Group B	1.93	15	.594	.153		
ORGASM	Group A	2.40	15	.507	.131	6.205	0.00
	Group B	1.67	15	.617	.159		
EJACULATORY CONTROL	Group A	2.60	15	.507	.131	2.779	0.015
	Group B	2.07	15	.594	.153		
APPEARANCE OF SEMEN	Group A	1.87	15	.352	.091	0.00	1.00
	Group B	1.87	15	.352	.091		
SPERM COUNT	Group A	46.80	15	8.637	2.230	2.504	0.025
	Group B	40.27	15	8.827	2.279		
PH OF SEMEN	Group A	7.53	15	.215	.056	2.955	0.010
	Group B	7.31	15	.281	.073		
MORPHOLOGY	Group A	.68	15	.130	.034	3.830	0.002
	Group B	.58	15	.122	.031		
VITILITY	Group A	.62	15	.085	.022	4.373	0.001
	Group B	.50	15	.069	.018		
MOTILITY	Group A	.54	15	.043	.011	6.205	0.002
	Group B	.47	15	.078	.020		

### Statistical Significance:

- **Group A:** Showed highly significant improvement ( $P < 0.001$ ) in all parameters including sperm count, motility, and sexual health scores.
- **Group B:** Showed significant improvement in most parameters, but the change in **sperm count** was statistically non-significant ( $P = 0.134$ ).

## DISCUSSION

### *MASHA PAAYASA* – MODE OF ACTION

#### **MASHA :**

*Bṛhmaṇa* & *Vṛṣya* Effect

*Masha* is Guru (heavy), *Snigdha* (unctuous), and *Madhura Rasa*, which directly contributes to the formation and nourishment of *Shukra Dhatu*.

It promotes *Dhatu Poshana* (tissue building), specifically nourishing *Rasa* → *Rakta* → *Māṃsa* → *Meda* → *Asthi* → *Majjā* → *Shukra* in sequential tissue metabolism.

Its *Uṣṇa Vīrya* stimulates *Agni* and aids in transformation into reproductive essence.

High protein (25g/100g), zinc, magnesium, and iron content in *Masha* support spermatogenesis and testosterone synthesis.

Restores seminal consistency, improves ejaculatory volume and viscosity.

*Masha* is rich in antioxidants like polyphenols, vitamin E.

Reduces oxidative stress in testes → prevents sperm DNA damage and apoptosis.

#### **DUGDHA:**

*Dugdha* is extensively described in Ayurveda as:

*Bṛmhaṇa* – Body and tissue nourishing

*Shukrajanana* – Enhancer of semen

*Rasayana* – Rejuvenator

*Ojovardhaka* – Enhances *Ojas* (vital essence)

It is considered one of the most *Shreshta Ahara Dravyas* (best foods) for *Shukra Dhatu Poshana*.

*Dugdha* is *Shukral* – promotes quantity and quality of semen.

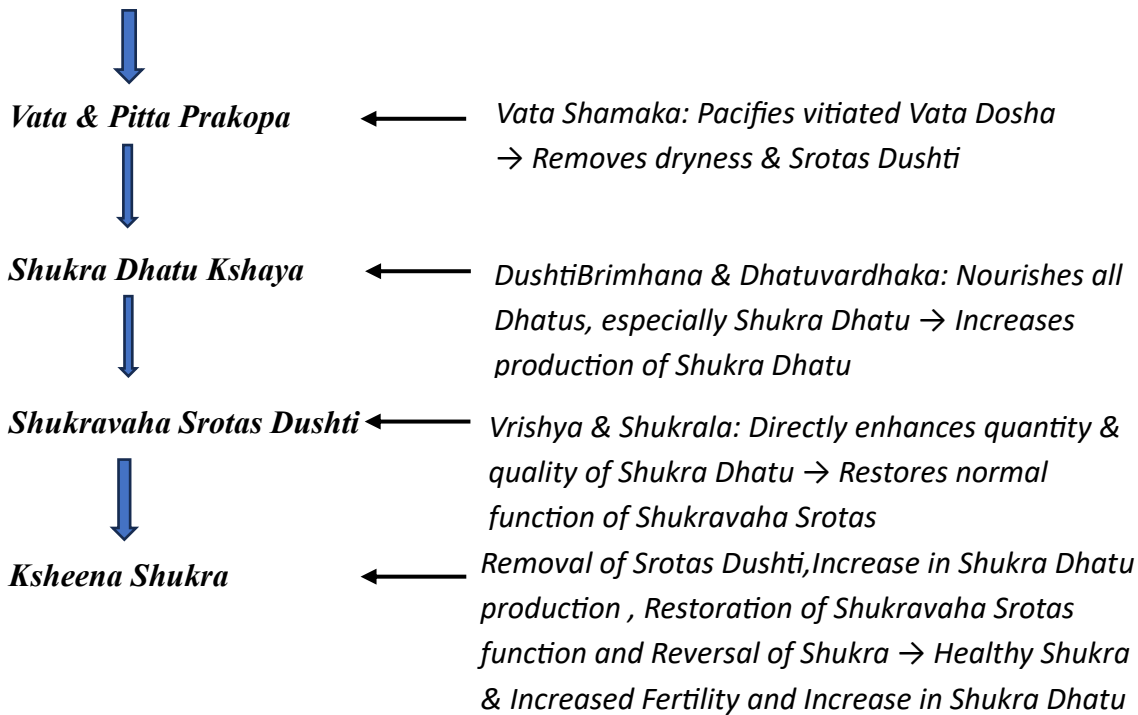
It improves ejaculatory volume, viscosity, and sperm motility by contributing to *Snigdhatā* (unctuousness) of *Shukra Dhatu*.

Milk is a rich source of complete proteins, essential amino acids, zinc, calcium, vitamin B12, and healthy fats, which Aid spermatogenesis, Improve testicular volume and Support libido and energy.

Milk fats, especially saturated fats, help maintain seminal plasma consistency. Lactoferrin and immunoglobulins support reproductive immune health.

**SAMPRAPTI VIGHATANA (PROBABLE MODE OF ACTION)**

*Nidana Sevana (Causative Factors)*



*Ksheena Shukra* involves *Agnimandya* leading to the production of *Ama*, which obstructs the *Shukravaha Srotas*. *Masha Paayasa* acts through *Samanya Vishesh Nyaya*; its qualities (*Madhura, Snigdha, Sheeta*) are similar to *Shuddha Shukra*, thereby directly enhancing the *Shukra Dhatu*.

**DISCUSSION ON RESULTS:**

**1. EFFECT ON SEXUAL DESIRE:**

Impact of treatment on both groups w.r.t Sexual Desire has demonstrated statistically significant results.

**Group A**

Mean values of Sexual desire assessed BT and AT were 0.47 and 2.47 respectively and the relief obtained on Sexual desire was 53% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A.

**Group B**

In Group B, mean values of Sexual desire assessed BT and AT were 0.07 and 1.87 respectively and the relief obtained on Sexual desire was 73% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group B.

**2. EFFECT ON ERECTION:**

Impact of treatment on both groups w.r.t Erection has demonstrated statistically significant results.

**Group A**

Mean values of Erection assessed BT and AT were 0.53 and 2.73 respectively and the relief obtained on Erection 73% was assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A.

**Group B**

In Group B, Mean values of Erection assessed BT and AT were 0.67 and 1.93 respectively and the relief obtained on Erection 80% was assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

Majority of the drug are *Vrishya*, *Balya*, *Vajikaran*, and *kamoudipan* hence increase the erection of the patient.

### 3. EFFECT ON ORGASM:

Impact of treatment on both groups w.r.t *Orgasm* has demonstrated statistically significant results.

#### Group A

Mean values of Orgasm assessed BT and AT were 0.47 and 2.40 respectively and the relief obtained on Orgasm was 40% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A.

#### Group B

In Group B, Mean values of Orgasm assessed BT and AT were 0.67 and 1.67 respectively and the relief obtained on Orgasm was 86% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

This is because of *Shukrastambhan*, *Vajikaran* properties of the drug which further helps in the better control on ejaculation and then on to orgasm.

### 4. EFFECT ON EJACULATORY CONTROL:

Impact of treatment on both groups w.r.t Ejaculatory control has demonstrated statistically significant results.

#### Group A

Mean values of Ejaculatory control assessed BT and AT were 0.73 and 2.60 respectively and the relief obtained on Ejaculatory control was 60% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A.

#### Group B

In Group B, Mean values of Ejaculatory control assessed BT and AT were 0.93 and 2.07 respectively and the relief obtained on Ejaculatory control was 86% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

Better ejaculatory control of drug can be explained on the *kshukrastambhan*, *vajikaran*, *balya* properties of the drug.

### 5. EFFECT ON SPERM COUNT:

Impact of treatment on sperm count has demonstrated statistically significant results.

#### Group A

Mean values of sperm count assessed BT and AT were 19.00 and 46.80 respectively and the relief obtained on sperm count was 56% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

#### Group B

In Group B, Mean values of Sperm Count assessed BT and AT were 23.87 and 73.60 respectively and the relief obtained on sperm count was 21% assessed after treatment which was statistically not significant with p value ( $p > 0.134$ ).

This could be explained as majority of the drugs are madur in Rasa, Shita in Virya, *Madhur in Vipaka*, *Guru and Snighdha in Guna and Vata-Pitta Doshgnata*. They are having shukral properties and having qualities similar to the shukra. Moreover majority of drugs are *balya*, *vajikaran*, *rasayana*, *vrishya*, *brimhana* and *shukral* in nature. Hence it helped in increasing the total sperm count.

### 6. EFFECT ON APPEARANCE OF SEMEN:

Impact of treatment on appearance of semen has demonstrated statistically significant results

#### Group A

Mean values of appearance of semen Factor assessed BT and AT were 1.00 and 1.87 respectively and the relief obtained on appearance of semen was 86% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

### Group B

In Group B, mean values of appearance of semen assessed BT and AT were 1.40 and 1.87 respectively and the relief obtained on appearance of semen was 93% assessed after treatment which was statistically significant with p value ( $p < 0.004$ ).

### 7. EFFECT ON PH OF SEMEN:

Impact of treatment on both groups w.r.t PH of semen has demonstrated statistically significant results

### Group A

Mean values of PH of semen assessed BT and AT were 6.11 and 7.53 respectively and the relief obtained on PH of semen was 86 % assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

### Group B

In Group B, mean values of PH of semen assessed BT and AT were 6.47 and 7.31 respectively and the relief obtained on PH of semen was 53% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

### 8. EFFECT ON MORPHOLOGY:

Impact of treatment on Morphology has demonstrated statistically significant results .

### Group A

Mean values of morphology assessed BT and AT were 0.24 and 0.68 respectively and the relief obtained on morphology was 80 % assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

### Group B

In Group B, mean values of morphology assessed BT and AT were 0.25 and 0.58 respectively and the relief obtained on morphology was 60% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

There was little increase in the morphology of the sperms but that change may be possible as most of the drugs were *Shukral*, *Vajikaran* , *Vrishya* which helps in the *Utkrisht Shukra Dhatu* formation.

### 9. EFFECT ON VILITY:

Impact of treatment on Vility has demonstrated statistically significant results .

### Group A

Mean values of Vility assessed BT and AT were 31.13 and 8.40 respectively and the relief obtained on Vility was 7 % assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

### Group B

In Group B, mean values of Vility assessed BT and AT were 0.18 and 0.50 respectively and the relief obtained on Vility was 46% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ).

### 10. EFFECT ON MOTILITY:

Impact of treatment on motility has demonstrated statistically significant results .

### Group A

Mean values of motility assessed BT and AT were 0.18 and 0.54 respectively and the relief obtained on motility was 73 % assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ) in Group A

### Group B

In Group B, mean values of motility assessed BT and AT were 0.20 and 0.47 respectively and the relief obtained on motility was 64% assessed after treatment which was statistically highly significant with p value ( $p < 0.0001$ ). The majority of the drugs were having *Vajikaran*, *Rasayana* properties which act as powerful antioxidant properties and takes out the stress and hence increase the motility.

## CONCLUSION

*Masha Paayasa* is highly effective in treating *Ksheena Shukra* and improving the viscosity of semen and ejaculatory control. The trial drug showed a **67% improvement**, significantly higher than the **61%** observed with *Vidaryadi Choorna*. The treatment is economical, non-invasive, and effective at the OPD level without side effects.

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