



CLINICAL STUDY OF PUSHPADHANVA RASA WITH TAMBOOL PATRA SWARASA AS ANUPAN IN THE MANAGEMENT OF OLIGOZOOSPERMIA (KSHEEN SHUKRA)

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ABSTRACT

Infertility is the failure of a couple to become pregnant after one year of regular, unprotected intercourse. Male infertility can be defined as an inability to induce conception due to defect in spermatogenic functions. The male carrying pathological semen reports include Low sperm count, Volume, Motility, Abnormal forms and sperm functional tests possible etiological factors of infertility may be diagnosed under male infertility. The sample of 30 patients was studied, undergoing a specific treatment. *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *anupan* therapy were planned for this study sample. The effect of therapy was evaluated on various parameter and results were derived after statistical analysis of obtained data. After the treatment *Pushpadhanva rasa* with *tambool patra swarasa* as *anupan* moderate improvement in 13 patients, mild improvement in 9 patients, marked improvement in 3 patients, negligible improvement in 5 patients and no patients has complete remission. On the basis of statistical tests of significance, *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *anupan* has highly significant in subjective criteria and objective criteria as well in the management of Oligozoospermia (*Ksheen Shukra*).

Keywords: Oligozoospermia, *Ksheen Shukra*, *Pushpadhanva Rasa*, *Tambool Patra Swarasa*

INTRODUCTION: About 8% to 10% of couples of reproductive age experience infertility, and in approximately 40% of these cases male infertility is the major factor. Another 40% of infertility problems are caused by abnormalities of the woman's reproductive system and the remaining 20% involve couples who both suffer reproductive difficulties. Infertility affects one in 25 American men. More than 90% of male infertility cases are due to low sperm counts, poor sperm quality, or both. Oligozoospermia is one such condition for the cause of infertility, which is alone, is about 5% in India. Whether sperm counts are declining overall in industrialized countries is a controversial issue¹. There is no doubt that modern

medicine inspires awe. IVF laboratories and sophisticated ultrasound scanning machines appear very impressive and reassuring when you are infertile. However, paradoxically, even though the effectiveness of reproductive technology has improved dramatically, more infertile patients than ever before have become dissatisfied with their medical care today. This situation has resulted in a move towards "alternative medicine", which has become increasingly popular all over the world. Even in the United States of America (the bastion of high-tech scientific medicine), more than 20 per cent of infertile couples have consulted an alternative medicine practitioner, mainly because they were unhappy with modern

medical care². The *shukra dhatu* has a direct link with *ojas* or the immunity of the body. Hence, *Vajikarana* prescribed the therapeutic use of various aphrodisiacs and tonic preparations for enhancing the vigor and reproductive capabilities of men that also strengthens other body tissues (*dhatu*s) like muscles, fats, bones and blood. *Vajikarana* is mainly concerned with therapies concerning specific remedies for male infertility and impotence as well as female infertility. They serve as good aphrodisiacs and induce an immediate sense of pleasurable excitement, along with increased fertile seminal secretions even in an ageing person³. In *Ayurveda*, *Vajikarana* deals with various diseases like infertility and conditions relating to weak *shukra dhatu* or the vital reproductive fluids of the body. *Vajikarana* means the medicine or therapy by which the man becomes capable of copulating with the woman. It also helps in nourishing the body of the person. The Present thesis work is on “Clinical study of *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *anupan* in the management of Oligozoospermia (*Ksheen Shukra*). The concept of *Anupana* has been in *Ayurvedic* classics since archaic times. However, its importance and practical utility does not appear to have been fully recognized and applied, at any rate. Hence, the obvious requirement is to secure detailed information from the available literature, then procure a fair and critical understanding of the implication of this term in the light of observable facts available to us today and reconstruct the concept in view of later developments in the field of medicine. To do so, this concept is taken up for the study.

Ksheen Shukra (Oligozoospermia) is prevalent among the worldwide population. According to *ayurveda* text *Ksheen Shukra* is one of the *Asta-Vidha Shukra dusti*. *Ayurvedic* classics mentioned 8 types of *Shukra dusti*^{4, 5, 6} in which qualitative as well as quantitative vitiation of *Shukra Dhatu* caused by vitiated *Vata* and *Pitta* is mentioned in *ayurvedic* texts.^{7,8} The present thesis work would be to an effort to establish the phenomenon of Oligozoospermia (*Ksheen Shukra*) on the basis of *Ayurveda* principle and to treat the same by safe, economic, effective herbal formulation based upon proposed theory of Oligozoospermia (*Ksheen Shukra*).

AIM AND OBJECTIVES: To assess the clinical efficacy of *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *Anupan* in the management of Oligozoospermia (*Ksheen Shukra*).

MATERIALS & METHODS: It is open clinical study with pre test and post test design where minimum of 30 patients diagnosed with clinical condition *Ksheen Shukra* were selected between age group of 21-50 years of age. Patients were examined clinically and detailed history regarding disease and relevant lab investigations will be recorded in specially prepared Proforma. The semen analyses were carried out for diagnosis at Laboratory centers of Indore.

Pushpadhanva Rasa 250 mg BD with *Tambool Patra Swarasa* (10 ml) as *Anupan* for 12 weeks. The patients were assessed clinically and with semen analysis, before and after treatment.

Source of Data: Male patients were selected from OPD/I.P.D wing of Dept. of *Kayachikitsa* S.A.M.C. Indore.

Inclusion Criteria:

1. Patients of Male sex age between 21-50 years.
2. Patients suffering from Oligozoospermia (*Ksheen Shukra*) And Sperm count, Volume, Motility and Morphology are below normal range.
3. Patients willing and able to participate for 12 weeks.

Exclusion Criteria:

1. Patients aged below 21 years and above 50 years were excluded.
2. Patients with evidence of malignancy
3. Patients take such as medicine which has antioligozoospermia effect also.

Withdrawal Criteria:

The participant may be withdrawn from the trial if

1. He develops any serious adverse effect (Necessitating hospitalization).
2. There is non-compliance of the treatment regimen (minimum 80% compliance is essential to continue in the study)

Investigation: Semen analysis

Materials Used For Clinical Study:

Pushpadhanva Rasa with the dose of 250 mg BD with *Tambool Patra Swarasa* (10 ml).

Intervention: *Pushpadhanva Rasa* 250 mg BD with *Tambool Patra Swarasa* as *Anupan* was given after food for 12 weeks. Also the patients were kept under follow up period of 4 weeks, so that the total overall effect of treatment could be assessed.

Assessment Criteria:

Subjective Criteria: A scoring pattern will be adopted for the sign and symptoms of *Ksheen Shukra* mentioned in *ayurvedic* texts. The score of symptoms will be assessed before and after the treatment and statistical analysis will be undertaken.

1. *Daurbalya* (General Weakness)
2. *Mukh Soshā* (Dryness of mouth)
3. *Alpa Cheshta* (Lack of Libido)

A multidimensional scoring pattern were adopted for the sign and symptoms of *Ksheen Shukra* mentioned in *Ayurvedic* texts .The score of symptoms were assessed before and after the treatment and statistical analysis was undertaken.

Score were given according to the severity of the symptoms:

- Absence of symptoms --- 0
Mild degree --- 1
Moderate degree --- 2
Severe --- 3

Objective Criteria:Sperm Count before and after treatment.

Semen Examination:

- Sperm count
Volume
Motility
Morphology
Ph
Fructose Test

Numbers of Patient Registered For Study:

- Total numbers of patients – 30
Numbers of patients completed – 30
Numbers of patient drop out -0

Over All Assessment of the Treatment:

- Grade-1** Complete remission
100% Relief of sign and symptoms
Grade-2 Marked improvement
75-99% Relief in sign and symptoms
Grade-3 Moderate improvement
50-75% Relief in sign and symptoms
Grade-4 Mild improvement
25-50% Relief in sign and symptoms
Grade-5 Negligible improvement
0-25% Relief in sign and symptoms

Statistical Analysis: The information gathered on the basis of observation made about various parameters was subjected to

statistical analysis in terms of Mean, Standard Deviation and Standard error (SE). Paired t test was carried out at $p < 0.05$, $p < 0.01$, $p < 0.001$.

The obtained results were interpreted as:

Insignificant = $P > 0.05$

Significant = $P < 0.05$

Highly Significant = $P < 0.01$, $P < 0.001$, $P < 0.0001$

Presentation of Data: The results are presented under the following section:-

1. The first part expounds with the general observation
2. The second section deals with result of therapies on the basis of previous given criteria.

Study Design: The sample of 30 patients with classical sign and symptoms of *Ksheen Shukra* (Oligozoospermia) were selected randomly & to evaluate the efficacy of *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *Anupan*.

The data comprehended while conducting this clinical study on varied parameters are significant clues regarding the etiopathogenesis and progression made in this morbid state. The observation made in this regards are analytically compounded here under.

OBSERVATION AND RESULTS:

Table No-1 Effect of Pushpadhanva Rasa with Tambool Patra Swarasa as Anupan on subjective criteria sign and symptoms

Sign & symptoms	Mean score		% of Relief	S.D.	SE	T	N	P	Df
	B.T.	A.T.							
<i>Daurbalya</i>	1.633	0.833	48.98	0.550	0.100	7.954	30	<0.0001	29
<i>Mukh sosha</i>	1.666	0.933	44.15	0.639	0.116	6.279	30	<0.0001	29
<i>Alpacheshta</i>	1.700	0.933	45.09	0.678	0.123	6.185	30	<0.0001	29

Table No-2 Effect of Pushpadhanva Rasa with Tambool Patra Swarasa as Anupan on objective criteria volume

Daurbalya: The result of the study states that relief of 48.98% in *Daurbalya*. There is a statistically highly significant change 't' value 7.954 at the level of $P < 0.001$.

Mukh Sosha: The result of the study states that relief of 44.15% in *Mukh Sosha*. There is a statistically highly significant change 't' value 6.279 at the level of $P < 0.001$.

Alpa Cheshta: The result of the study states that relief of 45.09 % in *Alpa Cheshta*. There is a statistically highly significant change 't' value 6.185 at the level of $P < 0.001$

Sperm count: There is significant increase in sperm count. The average percentage increased by 49.83%.The change that occurred with the treatment is greater than would be expected by chance; there is a statistically significant change with at the level of $P < 0.001$.

Volume: The patients of *Shukradusti* got increased in volume by 46.08% .The values are statistically significant at the level of $P < 0.001$

Motility: It shows average percentage of increase was 42.92%, there is statistically significant change at the level of $P < 0.001$.

Morphology: It shows average percentage of increase was 34.42%, there is statistically significant change at the level of $P < 0.001$.

Objective Criteria	Mean Score		% of Change (Relief)	SD	SE	T	N	P	Df
	B.T.	A.T.							
Sperm count	39.266	58.833	49.83	9.008	1.644	11.897	30	<0.0001	29
Volume	1.380	2.016	46.08	0.335	0.061	10.385	30	<0.0001	29
Motility	44.333	62.333	42.92	11.933	2.178	8.261	30	<0.0001	29
Morphology	50.833	68.333	34.42	13.942	2.545	6.875	30	<0.0001	29

Table No-3 Over All effect of Pushpadhanva Rasa with Tambool Patra Swarasa as Anupan on subjective criteria [Symptoms wise]

Treatment effect	No. Of pt.	Percentage
Complete remission	00	0
Marked improvement	03	10
Moderate improvement	13	43.33
Mild improvement	09	30

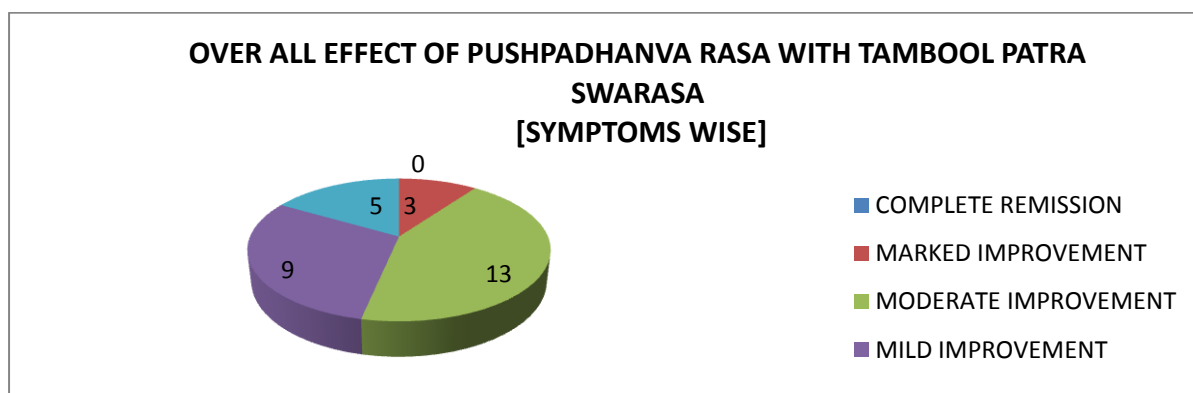


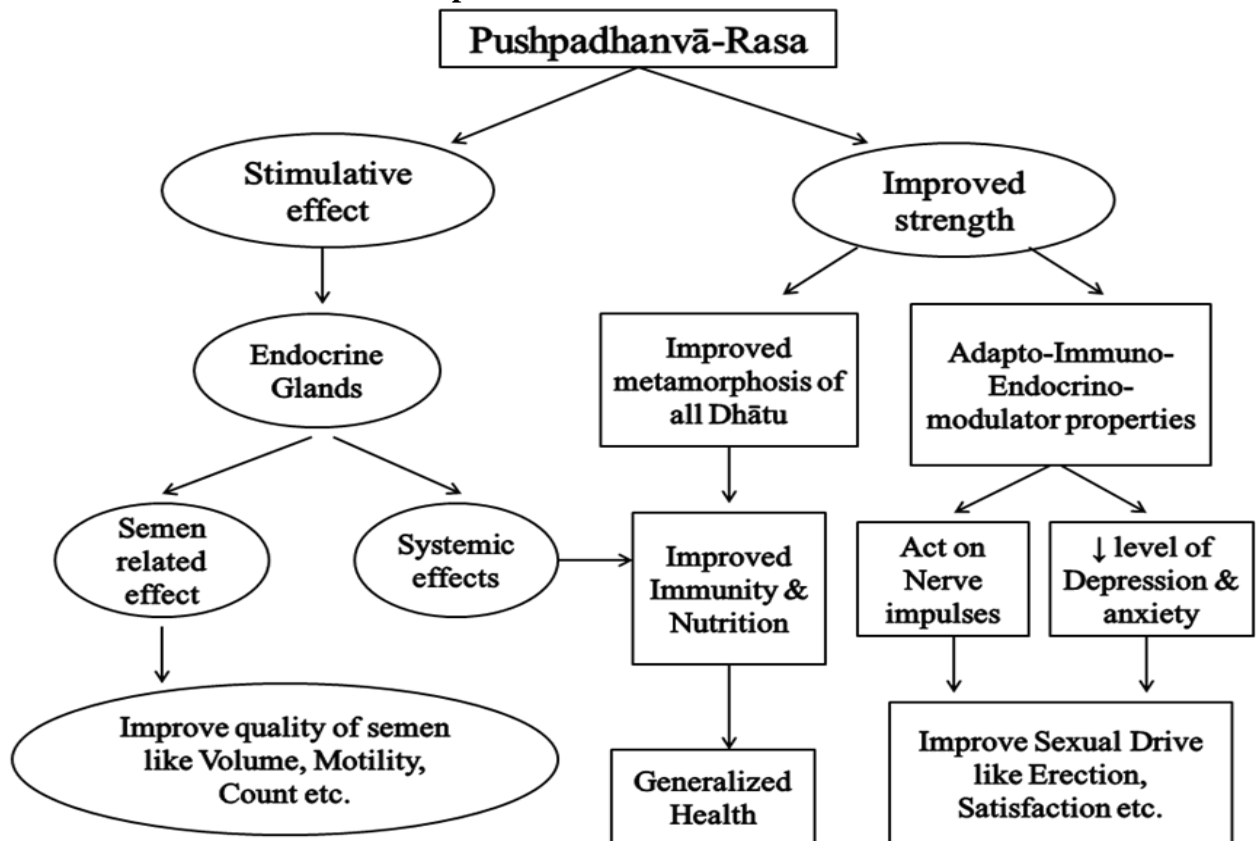
Table No-4 Patients wise percentage of relief on symptoms

Patients	Opd no.	Symptoms wise Relief
1	26773	60.24
2	31467	14.28
3	31485	25.06
4	31561	25.06
5	31642	17
6	31656	33.33
7	31678	50.37
8	31694	33.5
9	31731	19.87
10	31751	67
11	31831	50.37
12	31843	67
13	31847	24.81
14	31943	33.5
15	31910	39.75
16	32003	17
17	31921	60.24
18	31903	67
19	32436	83.5
20	32683	60.24
21	33120	50.37
22	33248	33.5
23	33651	33.5
24	34305	50.37
25	34307	67

26	34308	39.75
27	34311	67
28	34382	60.24
29	34384	75.18
30	34498	83.5

DISCUSSION:

Probable mode of action of Pushpadhanva Rasa



In Ayurvedic classics herbal and herbo-mineralfertility agents are explained in detail, role of *Pushpadhanva rasa* in treatment of *Shukradosha* is emphasized in *Sushruta samhita*, and *pushpadhanva rasa* with *tambool patra swarasa* as *anupan* not a single research work has been reported till date. *Pushpadhanva rasa* is *Shukra Janaka* and *Shukra Shodhaka* when given along with *Anupana* of *Tambool Paatra Swarasa*. Considering the above view present study is planned to evaluate its

clinical efficacy on Oligozoospermia (*Ksheen Shukra*) Herbo-mineral compound in *Pushpadhanva Rasa* is enumerated as *Veerya Vardhaka* in *Yogratnakar*⁹. So it can be inferred that it increases *Shukra*. Hence *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *anupan* has been selected for present study. Chief ingredients of *Pushpadhanva Rasa* are having *Vajikarak* properties like *Yogavahi*, *Dhatuvrddhikara*, *Veeryavardhana*, *Agni Pradiptikara* etc. and *Tikta*, *Katu Rasa*,

Laghu, Vikasi, Vyavayi Guna of Bhavana Dravya may lead to stimulative effect; mainly on endocrine glands. This affect locally to the testes and accessory sex glands, resulted in to improve quantity and quality of semen like count, volume, mortality and morphology. Bhasmas properties like Vrshya, Rasayana, Balya, Pushtikara, Brhmhana etc and Vrshya prabhava of Bhavana Dravya lead to improvement in general body strength. This adapto-immuno-endocrino-modulator properties of drug may act on nerve impulses and also decreased the level of depression and anxiety which further results into improvement of sexual drive like erection, satisfaction etc. These strengthen and stimulative effects ultimately improve metamorphosis of all Dhatu. As a result of this improvement in immunity and nutrition may lead to improvement in the generalized health status.

Tambool patra Daurbalyahar, Dhvajabhangahar, Aphordisiac action and work as a tonic. It is useful in Impotency, Indigestion . Tambool patra chewing is considered as a good & cheap source of improve digestion. It has also properties like Uttejaka, Deepana, Pachana, Vajeekara and Kamagni Sandipanam¹⁰ and Anti Infertility Pharmacological Activities.

CONCLUSION: The conclusion is an essence of whole study. Following points can be concluded on the basis of observation, results and thorough discussion in the present context After the treatment *Pushpadhanva rasa* with *tambool patra swarasa* as *anupan* moderate improvement in 13 patients, mild improvement in 9 patients, marked improvement in 3 patients, negligible

improvement in 5 patients and no patients has complete remission.. Overall effect observed in patients of Oligozoospermia (*Ksheen Shukra*) Treated by *Pushpadhanva Rasa* with *Tambool Patra Swarasa* as *anupan* on all criteria of assessment showed that the treatment is proved better statistically & symptomatologically. One more thing that results of this study are encouraging, still trial should be conducted for longer duration to provide much better results to patients.

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