

A CLINICAL STUDY OF *KATAKA CHURNA* ON MALE SEXUAL DYSFUNCTION & POOR VISION.

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Abstract

Context: Excessive sexual activity or masturbation causes oxidative stress, damaging the inner layer of the eye where the rods and cones are located. Think of rods and cones as molecular strainers that catch light. Oxidative stress of ocular tissues is a major culprit behind vision problems, such as eye floaters, glaucoma and cataracts.

Aim: To evaluate the efficacy of *Kataka churna* in the management of Male sexual dysfunction and Poor vision.

Methodology: 50 patients who have *Timira* (Poor vision) with associated symptoms Male sexual dysfunction (MSD) had selected for randomised control trial based on inclusion & exclusion criteria.

Results: The trial drug *Kataka churna* showed statistically significant results in subjective parameters of poor vision (*Timira roga*) but insignificant in MSD.

Key words: *Timira*, MSD, *Kataka churna*

Introduction:

Eyesight is the God's greatest gift to humankind, the blessing that allows us to see our surrounding and feel the exquisite beauty of God's creation. Life without eyesight is miserable and valueless. Hence, it is very important to protect vision at any cost.

Normal vision is being able to see a certain size line on the eye chart [the Snellen chart] from 6 meters away; a normal eye has a near point of 25cm to clear vision.

Acharya Sushruta classified the diseases of eye, according to the site of lesion. One group of eye diseases, known as '*DrishtigataRoga*' are

responsible for visual impairment, both partial and complete.

Drishti: The word *Drishti* has used in two different meanings in *Ayurvedic* classics.

Drishti in anatomical sense:

- *Drishtim* = *Mandala* (Part of *Netra*).

Size of *drishtimandala* is 1/7 part of *krishnamandala*ⁱ.

- *Drishtikleda* = Lubricating fluid of the eyeballⁱⁱ

Drishti in physiological sense:

- *Drishtikrishth* = Dimness of vision - *Kshudhavegadharanat*ⁱⁱⁱ.

- *Drishtihaana* = Loss of vision.

If *Adhimantha* is not treated properly leads to this condition (prognosis of *adhimantha*).^{iv}

- *Drishtivisha* = Some immortal Snakes eg. *Vasuki* has poison in its vision^v.

Timira comes under the group of *DrishtigataRoga*. *Sushruta* considers *Timira*, *Kacha* and *Linganasha* as the progressive clinical stages of the disease *Linganasha*^{vi}. Many of the clinical features described for *Timira* are having similarities with the refractive errors.

Aacharya Sushruta described *Atimaithun* (excessive sexual activity), is an etiological factor causing *Netraroga*.^{vii} *Aacharya Sushruta* not described separate etiological factors of *Drishtiroga*, there for all the etiological factors of *Netraroga* also causing *Dristi-gataroga*.

Need of study:-According to study, excessive sexual activity or masturbation causes oxidative stress, damaging the inner layer of the eye where the rods and cones are located. Think of rods and cones as molecular strainers that catch light. When the strainer become damaged due to oxidative stress, or a deficiency in cGMP, nitric oxide or acetylcholine, the rod visual sensory nerves experience a depletion of C3G phytochemicals, which stabilizes visual input. C3G phytochemicals allow the eye to process images, like a graphics card in a computer. When C3G phytochemicals see a reduction, the eye cannot process images fast enough. The blurry, squiggly lines known as eye floaters are the result of reduced C3G chemicals trying to process images.

Men who ejaculate multiple times a day experience deficiencies in these neuro-chemicals necessary for health eyes and sexual function. Per recent studies, a correlation of eye floaters and sexual dysfunctions, e.g., weak erections, premature ejaculations and impotence, were found. Research has further shown that oxidative stress damages the sympathetic nerves and smooth muscles of the iris. Oxidative stress of

ocular tissues is a major culprit behind vision problems, such as eye floaters, glaucoma and cataracts. In fact, Western Europe scientist found almost half of individuals with inflammation involving the posterior segment of the eye had visual impairment. The inflammatory response was often triggered by infection, systemic and metabolic disorders, such as sexual exhaustion.^{[1] [3] [4] [5] [6]}^{viii} Patient having sexual dysfunction generally takes sex inducing drugs like sildenafil and tildenafil which cause many side effects include blurred vision and changes in colour vision, abnormal ejaculation, and prolonged erections including abnormal vision, change in colour vision and blurred vision. However, in ayurveda drugs used for the same do not cause side effects like sildenafil and tildenafil.

The enzyme that Viagra-like drugs inhibit is found primarily in two places in the body, the erectile tissue of the penis and the retina of eye, that's why the FDA encourages people to stop taking drugs like Viagra, and call a doctor right away if you experience sudden loss of vision. According to our classics, texts drug theses works on spermatogenesis also addition works on enhancing both immunity and vision.

Considering the above factors and drawbacks, hindrances of the modern system of medicine an effort has been done to find the treatment therefore it is necessary to find a effective treatment.

Aims & Objectives:

To evaluate the efficacy of *Kataka Churna* in the management of Male sexual dysfunction & Poor vision.

Methodology:

The study conducted under a strict protocol to prevent bias to reduce the sources of error in the study. This study conducted under the following steps-

1. Selection of patients
2. General observation

3. Administration of drug

The patients for the clinical study were selected from O.P.D. and I.P.D. of NIA Arogyashala Hospital, Roga Nidāna Evam Vikṛti Vijñāna and Shalakya department. Selection carried out based on relevant history, signs, symptoms and laboratory investigations suggestive for the disease *Timira* (refractive errors). An annexed part of Performa those incorporated with the diagnostic criteria of *Timira* (refractive errors) with the associated complaints of Male sexual dysfunction (MSD). 50 patients of *Timira* (refractive errors) with the associated complaints of Male sexual dysfunction (MSD) registered for the clinical study.

A written information and consent form has been given to the selected patients. The patients explained about the purpose, procedures and possible side effects of the trial drugs.

Table 1: Drugs:

S.N.	Drug	Latin Name	Part used	Form
1.	<i>Kataka</i>	<i>Strychnos potatorum</i>	Seed	Churna

Dose: *Kataka churna* in dose of 3gm BD with lukewarm water

Duration of Trial: 2 months

Follow up 15th, 30th, 45th and 60th days,

Non-drug follows up at the interval of one month for the period of 3 months.

Criteria for the selection of the patient:

A. Inclusion-criteria:

- Male patients, presents with the complaints of low vision.
- Patients with classical features of *Timira* mentioned under the methods of collection of data included.
- Age between 20-50 years.

B. Exclusion-criteria

- Female patients.
- Age-related eye diseases- as macular degeneration and cataracts.
- Patient suffered from major illness and trauma.
- Patient suffered Eye diseases like Glaucoma, Corneal Ulcers and Trachoma.
- Patient have suffering High B.P., Cardiac diseases, AIDS and Diabetes.

Withdrawal Criteria: -During the course of the clinical trial, that patients who cannot follow the given instructions, they were withdrawn from trial.

Assessment Criteria:

Subjective Parameters: Patients selected for relief symptoms like- *Avyakta Rupa Darshan/ Duram na pashyate* (Indistinct distance vision), *Vihwala Darshana* (Blurred vision) and *Makshikadi abhuta dravya darshan* (Floaters), *Dwidha/ Bahuvridha darshan* (Diplopia/Polypia), *Shirobhitapa* (Headache), *Klabiya* (erectile dysfunction), *Dorbalya* (General weakness), and *Methunaharsa* (Loss of libido). All the symptoms are classified into grades. The improvements in grades were recorded at different levels.

Table 2: Grading of patients with reference to different symptoms:-

Awyakta Darshna/ (Indistinct distance vision)

S.N		Grading
1	No feeling of blurring of the vision	0
2	Occasional blurring of the vision	1
3	Routine blurring which affected routine work	2
4	Regular blurring disturbing routine work	3
5	Complete darkness before the eyes	4

Table 3: Makshikadi abhuta dravya darshan (Floaters)-

Visualization of non-existing objects like flies, gnats, hairs, webs, circles, flags, mirage and ear rings.

S.N		Grading
1	No such problem	0
2	Occasional visualization of any such objects	1
3	Irregular visualization of two to four kinds of the above mentioned objects	2
4	Regular visualization of two to four kinds of the above mentioned objects	3
5	Regular visualization of more than four kinds of the above mentioned objects	4

Table 4: Dwidha Darshana/ (Diplopia)-

S.N		Grading
1	No diplopia	0
2	Occasional diplopia	1
3	Regular diplopia without disturbing routine work	2
4	Regular diplopia disturbing day-to-day work	3

Table 5: Shirobhitapa/ (Headache) - Scored on the frequency of attacks

S.N		Grading
1	No headache	0
2	Very occasional headache	1
3	Irregular attacks of frequent headache	2
4	Regular attacks of Headache	3

Table 6: Vihwala Darshana (Blurred vision)-

S.N		Grading
1	Clear vision	0
2	Blurred vision on and off (on stimulate)	1
3	Blurred vision on and off (without stimulate)	2
4	Always blurred vision	3

Table 7: Erectile dysfunction:

S.N		Grading
1	Healthy/No E.D.	0
2	Some time/Mild E.D.	1
3	Mostly/Moderate E.D.	2
4	Completely/Severe E.D.	3

Table 8: Doorbalya (General Weakness)

S.N		Grading
1	No weakness	0
2	Mild weakness during hard work.	1
3	Moderate weakness during routine work.	2
4	Excessive weakness during routine work.	3

Table 9: Methunaharsa (Loss of libido)

S.N		Grading
1	No loss libido	0
2	Decreased libido but can perform sexual activity.	1
3	Decreased libido but can perform sexual activity with difficulty.	2
4	Loss of libido and cannot perform sexual activity.	3

EFFECT OF THERAPY

The effects of the therapy on 50 patients who had been completed the trial is presented in this section. Subjective parameters i.e. *Avyakta Rupa Darshan/ Duram na pashyate* (Indistinct distance vision) , *Vihwala Darshana* (Blurred vision) and *Makshikadi abhuta dravya darshan* (Floaters) , *Dwidha/ Bahuvridha darshan* (Diplopia/ Polypia) , *Shirobhitapa* (Headache), *Klabiya* (erectile dysfunction) , *Dorbalya* (General weakness), and *Methunaharsa* (Loss of libido) improvement were assessed by Wilcoxon matched-pairs signed-ranks test for one group therapeutic effect and for the assessment of therapeutic effect.

Table 10: Effects of Kataka Churna on Avyakta Rupa Darshan (Indistinct distance Vision).

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.76	1.52 \pm 0.555	0.24	13.64%	142.5	28.5	0.078	114.0	0.01	S

Table 11: Effect of Kataka Churna on Vihwala Darshana (Blurred Vision) :

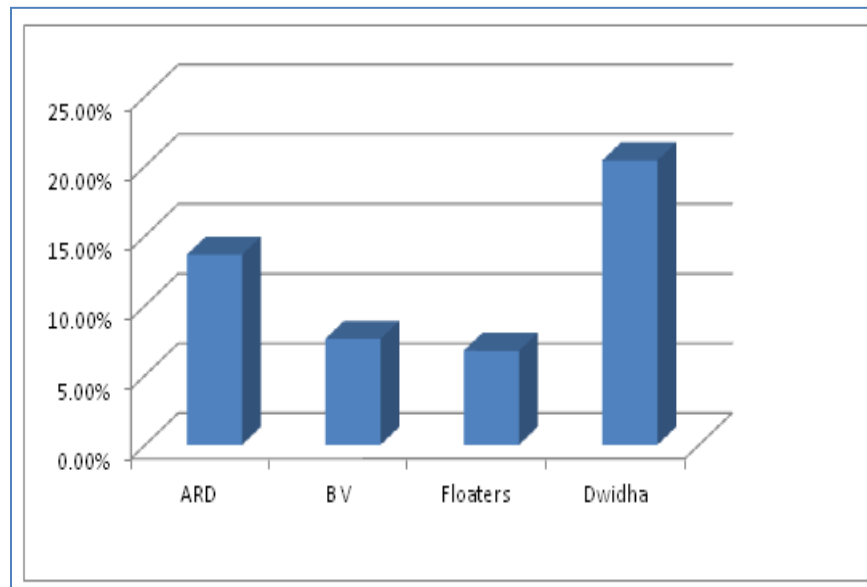
N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.84	1.70 \pm 0.609	0.14	7.60%	28.0	0.00	0.049	28	0.015	S

Table 12: Effect of Kataka Churna on Makshikadi abhuta dravya darshan (Floaters) :

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.78	1.66 \pm 0.385	0.120	6.75%	31.5	4.5	0.054	27	0.0547	IN .S

Table 13: Effect of Kataka Churna on Dwidha/ Bahuvridha darshan (Diplopia/ Polypia):

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	0.98	0.78 \pm 0.519	0.20	20.4%	111.5	24.5	0.074	87.0	0.0547	S



(Symptoms-ARD= Avyakta Rupa Darshan, BV=Blurred vision)

Table 14: Effect of *Kataka Churna* on *Shirobhitapa* (Headache) :

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.84	1.70 \pm 0.350	0.14	7.61%	28.00	0.00	0.054	28.00	0.015	S

Table 15: Effect of *Kataka Churna* therapy on General Weakness:

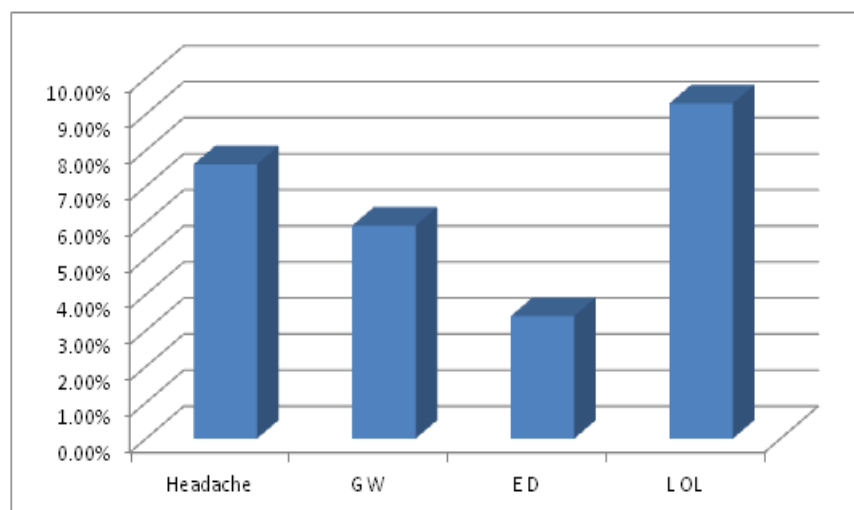
N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.34	1.26 \pm 0.39	0.08	5.97%	27.0	9.00	0.05	18.0	0.015	IN S.

Table 16: Effect of *Kataka Churna* therapy on Erectile Dysfunction:

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	1.16	1.12 \pm 0.44	0.04	3.4%	33	22	0.063	11	0.621	IN S.

Table 17: Effect of *Kataka Churna* therapy on Loss of Libido:

N	Mean \pm SD			% Change	T+	T-	S.E.	W	P	Result
	BT	AT	Diff							
50	0.86	0.78 \pm 0.48	0.08	9.30%	52.0	26	0.069	26.0	0.339	IN S.



(Symptoms: GE=General Weakness, ED=Erectile dysfunction, LOL=Loss of Libido)

Discussion:

Various *Acharya* considered as *Chakshuya* and many other properties (*Vatakaphashamak*, water purifier, *Vishghana*, *Kasya*, *Nertaroga*, *Ashamari*, *Madhumeha*, *Shothpandukamla*).^{ix} &^xSeeds gave also gave brucine, strychnine, novacine, icajine, oleanolic acid and its glycoside. The seeds resemble those of *Nuxvomica* but are non-poisonous.

Properties, which leads to *Samprapti Vighatana* that control poor vision (*Timira*) but not male sexual dysfunction. *Strychnos potatorum* seeds powder possesses suppressive effects on male fertility and could be useful in development of male contraceptive agent.^{xi}

The trial drug *Kataka churna* showed statistically significant results in subjective parameters of Visual disturbances (*Timira roga*) and visual acuity. However, it showed statistical insignificant results in subjective parameters of male sexual dysfunction (*Shukravaha Srotodushthi*).

Conclusion: The conclusion of present study is that *Kataka churna* should not used to treat Male sexual dysfunction.

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