

**EFFECT OF PUSHPADHANWA RASA IN THE MANAGEMENT ERECTILE  
DYSFUNCTION**Dr. Ashish Patel<sup>1\*</sup>, Dr. K. H. H. V. S. S. Narasimha Murthy<sup>2</sup>, Dr. J. S. Tripathi<sup>3</sup> and Dr. Kirti Patel<sup>4</sup><sup>1</sup>Residential Medical Officer, District Ayurved Hospital Sagar.<sup>2,3</sup>Professor, Division of Manas Chikitsa (Psychosomatic Medicine and Neuropsychiatry) Department of Kayachikitsa, Faculty of Ayurveda, Institute of Medical Sciences, B.H.U., Varanasi.<sup>4</sup>Ayurved Medical officer, District Ayurved Hospital Sagar.

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**ABSTRACT**

Male Erectile dysfunction (*Klaibya*) is common among men of all ages, it has been recently estimated that in 1995 more than 152 million men worldwide experienced sexual dysfunction and this number will rise, to approximately 322 million by the year 2025. Several reports reveals that psychological disturbance such as stress, anxiety, guilt, depression, low self-esteem, conflict between partners, performance anxiety etc. cause 10% to 20% of ED cases. Hence considering above facts the present study aimed to evaluate the efficacy of the pushpadhanwa rasa in the management of psychogenic erectile dysfunction. The assessments were based on the scoring of sexual health quiz and clinical symptoms. 20 patients treated *Pushpadhanwa Rasa* with the *anupana* of milk for period of 90 days. The result showed statistically significant improvement in symptom of erectile dysfunction. Based these, highly significant improvement found in penile erection, penile rigidity and SHQ variables.

**KEYWORDS:** *Pushpadhanwa Rasa*, Male Erectile Dysfunction, *Klaibya*, SHQ.**INTRODUCTION**

'Male erectile disorder' or 'erectile dysfunction' - characterised by the recurrent and persistent partial or complete failure to attain or maintain an erection until the completion of the sexual act. *Klaibya* or erectile dysfunction (ED) is a very common male sex dysfunction which affects majority of men sometimes in their lives. It has been reported to affect as many as 152 million men worldwide. Over half of men referred to sexual dysfunction clinics complain erectile dysfunctions. Several reports reveals that psychological disturbance such as stress, anxiety, guilt, depression, low self-esteem, conflict between partners, performance anxiety etc. cause 10% to 20% of ED cases. Other possible causes include organic pathological condition damage to nerves, arteries, smooth muscle and fibrous tissue, disease-diabetes mellitus, hypertension, chronic alcoholism, multiple sclerosis, smoking etc. The comparative study of Ayurvedic and modern literature revealed that term *Klaibya* represents all the feature of diagnostic entity sexual dysfunction ED. If use sees the sexual dysfunction in male in our ancient literature there is much comprehensive description available in this respect. The male sexual dysfunction is mainly enlightened in the form of *Klaibya* and the person is called '*Kleeba*' *Shanda* & *Napunsaka* are the synonyms to *Kleeba*.

All these disorders are characterized by associated inability of penile erection in normal sexual act the search for an identical or similar disease that pulsate with importance resolve around a single disease. *Klaibya* because *Klaibya* encompasses all sexual dysfunction of men and as associated of penile erection failure. *Acharya Charak* described clinical feature of *Klaibya*. Though continually pre-occupied mentally with sexual thoughts yet the person does not approach the willing partner or approaches her very rarely if ever. Owing to impaired erectile power, he is afflicted with hard breathing, perspiration of entire body, lack of erection and lack of sperm and his desire and efforts at mating get frustrated these are general symptoms of *Klaibya*. *Acharya Susruta* described clinical feature of *Mansik Klaibya*, *Klaibya* due to injury to the mind caused by contentment with unpleasant things and disliked woman is known as *Manas Klaibya*.

**AIM AND OBJECTIVES**

Clinical evaluation of Pushpadhanwa Rasa (PDR) in the management of erectile dysfunction.

**SELECTION OF TRIAL DRUG**

In present study, *Pushpadhanwa Rasa* (PDR) has been selected as intervention for the management of Erectile Dysfunction. *Puspadhanwa Rasa* is mentioned in

*Bhaisajya Ratnawali Vajikaranaadhikar*. This is a unique combination of *Vajikarana* properties. Pushpadhanwa contains five minerals like *Rasasindoor Bhasma*, *Abharak Bhasma*, *Lauha Bhasma*, *Naga*

*Bhasma*, *Vanga Bhasma* and five herbal drugs like *Bhanga* (*Cannabis sativa* Linn), *Dhatura* (*Datura metel* Linn), *Shalmali* (*Salmalia malabarica*), *Nagawalli* (*Piper betle*), *Yasthimadhu* (*Glycyrrhiza glabra*).

<b>Dosage of Trial Drug</b>	125mg twice a day with milk
<b>Total Duration of Trial</b>	3 Months (90 days)
<b>Follow-up</b>	At interval of 1 month each

### SELECTION OF CASES

The total no. of 20 patients was selected for clinical study from the outdoor patients (OPD) in dept. of Kayachikitsa –Manas Roga Clinic (Psychosomatic medicine & Neuro-Psychiatry), S. S. Hospital, BHU, Varanasi. Further, the details of clinical examination and investigations were recorded in a proforma set up for the diagnosis purpose. The patients were interviewed for collection of different data. Along with the patient his relatives and attendants were also interviewed. Besides questioning, the patients were also observed for their state of mind and mental activity. The following inclusion and exclusion diagnostic criteria were applied for the selection of cases of Erectile Dysfunction.

### INCLUSION CRITERIA

Following inclusion criteria was followed for inclusion of the out patients for present clinical study-

- Patients who did fulfil the DSM-IV TR criteria for male erectile dysfunction.
- Patients ranging between 21 to 50 years of age were registered only.

### DSM-IV-TR Diagnostic Criteria for Sexual Dysfunction<sup>[4]</sup>

#### Male Erectile Disorder

- A. Persistent or recurrent inability to attain, or to maintain until completion of the sexual activity, an adequate erection.
- B. The disturbance causes marked distress or interpersonal difficulty.
- C. The erectile dysfunction is not better accounted for by another axis I disorder (other than a sexual dysfunction) and is not due exclusively to direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

### EXCLUSION CRITERIA

- a) Patients having significant medical illness viz., hypertension, diabetes mellitus, pulmonary tuberculosis etc, were excluded.
- b) Patients having significant psychiatric illness viz., major depressive disorder, schizophrenia etc.
- c) Patient having significant H/O surgical interventions viz., prostatectomy. Spinal surgeries etc. Were excluded.
- d) Patients having significant H/O trauma viz., spinal cord injuries etc. Were excluded.
- e) Patient having significant history of drugs that are known to induces impotency viz., anti hypertensive's *B*-blockers and diuretics, oral

psychotropic agents, anti – depressants etc. were excluded.

Patient who did not fulfil the DSM-IV-TR criteria (already explained in modern review) for male erectile dysfunction.

### ASSESSMENT OF RESULTS

#### SUBJECTIVE

The scoring system for erectile dysfunction in male, practiced in *Manas Roga* OPD with some changes was used for evaluating of the trial drug.

The scoring pattern adopted is as follows.

#### (1) Penile erection

- Erection whenever desired ..... - 0
- Erection in 75 % of the encounters ..... - 1
- Erection in 50 % of the encounters ..... - 2
- Erection in 25 % of the encounters..... - 3
- Only slight erection after severe manipulation..... - 4
- No erection at all ..... - 5

#### (2) Penile rigidity

- Proper stiffness to maintain erection and to continue sexual intercourse till last.- 0
- Some loss of stiffness but can maintain the erection and continue the act till last- 1
- Some loss of stiffness, able to maintain erection, but unable to cont. act till last - 2
- Loss of stiffness, can initiate sexual act but unable to maintain erection till last .. - 3
- Total loss of stiffness and unable to initiate the sexual intercourse ..... - 4

### OBJECTIVE

#### Sexual Health Quiz (SHQ)

Sexual health quiz is an important part of an individual's overall physical and emotional well-being. This questionnaire is designed to assess an individual's sexual performance by Irish health system. It is based on International Index of Erectile Function (IIEF). The questionnaire have 5 items with scores 0-4 or 0-5, with total scores ranging 0-24.

#### Q.1 How do you rate your confidence that you could get and keep an erection?

- 1 - Very low
- 2 - Low
- 3 - Moderate
- 4 - High
- 5 - Very high

**Q.2 When you attempted intercourse, how often were you able to penetrate (enter) your partner?**

- 0 - Did not attempt intercourse  
 1 - Almost never or never  
 2 - A few times (less than half the time)  
 3 - Sometimes (about half the time)  
 4 - Most times (more than half the time)  
 5 - Almost always or always

**Q.3 During sexual intercourse, how often were you able to maintain your erection after You had penetrated (entered) your partner?**

- 0 - Did not attempt intercourse  
 1 - Almost never or never  
 2 - A few times (less than half the time)  
 3 - Sometimes (about half the time)  
 4 - Most times (more than half the time)  
 5 - Almost always or always

**Q.4 During sexual intercourse, how difficult was it to maintain your erection to Completion of intercourse?**

- 0 - Did not attempt intercourse

- 1 - Extremely difficult  
 2 - Very difficult  
 3 - Difficult  
 4 - Slightly difficult  
 5 - Not difficult

**Q.5 When you attempted sexual intercourse, how often was it satisfactory for you?**

- 0 - Did not attempt intercourse  
 1 - Almost never or never  
 2 - A few times (less than half the time)  
 3 - Sometimes (about half the time)  
 4 - Most times (more than half the time)  
 5 - Almost always or always

Clinical interpretation can be summarized as.

Total score	Interpretation
<10	Erectile dysfunction
10-14	Good sexual performance
15-19	Better sexual performance
20-24	Best sexual performance

**OBSERVATION AND RESULT****Table No. 1: Table showing Effect of therapeutic trial on Penile Erection score in 54 patients of Klaibya(ED).**

Group and Grade of Penile Erection		BT		F1		F2		F3		Within the group comparison (Wilcoxon Signed Rank Test)
		No.	%	No.	%	No.	%	No.	%	
PDR (n=18)	0	2	11.11	4	22.22	6	33.33	6	33.33	$\chi^2 = -3.145$ P = 0.002 HS
	1	4	22.22	4	22.22	4	22.22	8	44.44	
	2	6	33.33	6	33.33	4	22.22	2	11.11	
	3	4	22.22	2	11.11	4	22.22	2	11.11	
	4	2	11.11	2	11.11	0	0.00	0	0.00	
<b>Mean ± SD</b>		2 ± 1.188		1.67 ± 1.283		1.33 ± 1.188		1.00 ± 0.970		

Initially all selected patients (88.88%) had mild to severe grade of difficulty in penile erection, whereas after last follow up only (66.67%) had mild to moderate difficulty in penile erection and remaining had no difficulty in penile rigidity and this difference in severity grade was statistically highly significant.

**Table No. 2: Table showing Effect of therapeutic trial on Penile Rigidity score in 18 patients of Klaibya(ED).**

Group and Grade of Penile Rigidity		BT		F1		F2		F3		Within the group comparison (Wilcoxon Signed Rank Test)
		No.	%	No.	%	No.	%	No.	%	
PDR (n=18)	0	0	0.00	2	11.11	6	33.33	6	33.33	$\chi^2 = -3.176$ P = 0.001 HS
	1	6	33.33	6	33.33	4	22.22	6	33.33	
	2	6	33.33	6	33.33	6	33.33	4	22.22	
	3	6	33.33	4	22.22	2	11.11	2	11.11	
	4	0	0.00	0	0.00	0	0.00	0	0.00	
<b>Mean ± SD</b>		2.00 ± 0.840		1.67 ± 0.970		1.22 ± 1.060		1.11 ± 1.263		

Initially all selected patients (100%) had mild to severe grade of difficulty in penile rigidity, whereas after last follow up only (66.67%) had mild to moderate difficulty in penile rigidity and remaining had no difficulty in penile rigidity and this difference in severity grade was statistically highly significant.

**Table No. 3: Mean changes in SHQ score in 18 patients of Klaibya (Erectile dysfunction).**

SHQ	Mean $\pm$ SD				Paired t test t value p value
	BT	F1	F2	F3	
Group I (n=18)	8.22 $\pm$ 2.777	9.78 $\pm$ 3.655	11.22 $\pm$ 4.25	12.89 $\pm$ 3.771	t = 3.276 p = 0.001

Initially the SHQ score was 8.22  $\pm$  2.777 (Mean  $\pm$  SD) and after treatment it was 12.89  $\pm$  3.771 (Mean  $\pm$  SD). The mean difference of SHQ score was 4.67, 't' value 3.276 and p<0.001, so highly significant.

## DISCUSSION

Two possible mechanisms have been proposed to explain the inhibition of erection in psychogenic dysfunction. i.e. direct inhibition of spinal erection centre by the brain as an exaggeration of the normal supra sacral inhibition (Steer 1990), and excessive sympathetic outflow or elevated Peripheral Catecholamine levels, which may increase smooth muscle tone and thus prevents the relaxation necessary for erection. This psychogenic dysfunction usually caused by Anxiety, fear of failure (sexual phobia, performance anxiety) and Depression. The above effect may be due to the anti anxiety, antidepressant and aphrodisiac effect of herbomineral drug *Pushpadhanwa Rasa*. It contains various herbal like Bhangra (*Cannabis sativa* L), Mulethi (*Glycyrrhiza glabra*), Nagawalli (*Piper betle*), Shalmali (*Salmaia malabarica*), and minerals in the form of Bhasmas like Naga, Vanga, Abhraka, Rasasindoor etc. Bhangra is one of the most widely used plants for both recreational and medicinal purposes several anecdotal reports describe the antidepressant effect of cannabis, with patients confirming beneficial outcomes from its use in primary or secondary depressive disorders. Glycyrrhizin inhibited monoamine oxidase, abundant evidence indicates that MAO inhibitors increase the concentrations of norepinephrine, serotonin and dopamine within the neuronal synapse through the inhibition of MAO enzyme and have antidepressant effects. The hydroalcoholic extract of roots and rhizomes of *Glycyrrhiza glabra* possesses anxiolytic activity. *Shalmali* have *Vrishya* and *Shukrasthambhan* properties, *Nagawalli* have *Vajikarana* property. *Abhraka Bhasma* increases masculine strength, power of retention of semen, nutrition, longevity, growth of semen, retentive faculties and the power of begetting children. Mica subjected to *Putam* for more than one hundred times is entitled to the name of *Bijam* (seed). Such mica increases semen, vitality, complexion and strength of body. Cellular internalization of the test drug is due to mica nanoparticles which constitute them. *Naga* and *Vanga Bhasma* have *Vrisya* property (testicular regenerative potential). These entire drugs combined in *Pushpadhanwa Rasa*, due to probably synergetic and multiple properties of these drugs make it unique combination. According to *acharya Dalahan* the *Vajikarana* therapy act as three viz. *Kavalam Dehabalokaram*, *Kevalam Manobalokaram*, *Dehamanobalkaram*, based upon this classification *Pushpadhanwa Rasa* put in *Dehamanobalkaram*.

## CONCLUSION

*Pushpadhanwa Rasa* is a unique combination of Ayurvedic herbomineral drugs. It reduces anxiety, depression, and systemic sensitivity. It has rejuvenating, *Vrishya*, *Medhya* and *Sthambhaka*, energetic, aphrodisiacs property. Based on the above findings, it can be concluded that the *Pushpadhanwa Rasa* can be used as an effective therapy for the management of the *Klaibya* (ED) without any adverse & side effects, instead promoting a greater degree of relief in the symptoms. Thus, the present study has shown potential of its wide application of this *Pushpadhanwa Rasa* in the management of *Klaibya* (ED).

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