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Research Article

A CONTROL STUDY OF YAVAKSHARA IN THE MANAGEMENT OF BENIGN PROSTATIC HYPERPLASIA (BPH) W.S.R. TO VATASHTHEELA

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ABSTRACT

In Ayurveda, *Vatashtheela* is one among the 12 types of *Mutraghata* (obstructive uropathy) disorders elaborated in the *Sushruta Samhita*. *Vatashtheela* disease closely resembles Benign Prostatic Hyperplasia (BPH) of modern medicine in its signs and symptoms. The control study has been carried out in two different groups. Each group made of 30 patients. In trial group 30 patients treated with Yavakshara. In control group 30 patients were treated with capsule Pyginal. It contains *Pygeum Africanum* which is useful in BPH. Phytotherapy refers to use of plant extract, which is popular in Europe as a herbal medicine for many years & also mentioned in modern text book of smith urology & commonly practiced by allopathic urologist. Patient was selected randomly irrespective of their religion, race, occupation etc. In BPH irritative and obstructive symptoms like frequency, urgency, staining, weak stream, incomplete emptying, nocturia, residual urine and uroflow rate were observed over the month of treatment from onset of treatment. Observations were made & results were analyzed with the help of unpaired 't' test at 0.05 level of significance.

KEYWORDS: Benign Prostatic Hyperplasia (BPH), *Astheela*, *Vatashtheela*, *Yavakshara*, Pyginal, Nocturia.

INTRODUCTION

In *Ayurvedic* classics *Mutraghata* gives the symptoms of low urinary output either by retention, absolute or relative anuria or oliguria *Mutraghata* is predominantly due to the *Vata Dosh*¹. The *Vata Dosh* is responsible to expel the urine output timely & uniformly. If *Vata* gets vitiated, it causes various diseases related to *Basti* & produces *Mutraroga* such as *Prameha*, *Ashmari*, *Mutraghata*, *Mutrakruccha* etc.

In *Ayurveda* the *Vatashtheela Vyadhi* which is a type of *Mutraghata* may have some similarity with BPH on the basis of symptoms like *Achala Unnata Granthi* (singly movable & elevated), *Vinmutranilasanga* (retention of urine, faeces & flatus), *Bastiadhmana* (distension of the urinary bladder), *Vedanachaparabastou* (excruciating pain in the bladder)².

BPH is most common benign tumor in male, and its incidence is age related. Risk factor for the development of the BPH are poorly understood. Some studies have suggested genetic predisposition and some have noted racial differences³. BPH is a senile disorder and chiefly affects individuals above the age of 50 years. The symptoms are those of bladder outflow obstruction,

with increased frequency of micturition, dribbling, hesitancy, and the features of chronic urinary retention.

In *Ayurveda* literature, *Mutra ghata* should be treated with *Bhaishajya Chikitsa* only. *Acharya Sushruta* decided general line of management of all type of *Mutraghata* by use of *Kashaya*, *Kalka*, *Avaleha*, *Kshar*, *Madhya*, *Aasava*, *Swedana*, *Basti* and *Uttarbasti*⁴ so, in was decided to use *Paniya Kshar* in the treatment of *Vatashtheela* (BPH).

Yava or barley (fig.1) is one of the oldest of cultivated cereals and extensively used as food and cattle feed and for malting brewing and pearling. Barley is utilized in various purposes and it enters in several products of food and pharmaceutical preparations other than alcoholic preparations.

Yavakshara is recommended in various diseases and used in indigenous medicine for treatment of certain ailments e.g. *Udararog*, *Mutrakruccha*, *Visha*, *Amadosa*, *Kaphavatavikar*, *Amavata*, and some other complaints. According to *Bhaishajyaratnavali*, *Yavakshara* is superior and best among other *Kshara* (alkali) as well as it can be used as a *Lekhankarma* (scraping) and having diuretic property⁵.

Yavakshara is *Katurasa in taste* and *Katuvipak, Ushna Virya, Vata, Kaphaghna* in action. While pyginal is a phyto therapeutic product extracted from the bark of "pygeum africanum Hooker"⁶. The extract has been used for treatment of bladder pains and micturation problems. So control study on *Yavakshara* and pyginal in the treatment of Benign Prostatic Hyperplasia (*Vatashtheela*) has been carried out.

Aims & Objects

- 1) To study etiopathogenesis, signs & symptoms of the BPH & *Vatashtheela*.
- 2) To study efficacy of *Yavakshara* & pyginal.

MATERIAL & METHODS

Present clinical study has been carried out in the OPD & IPD level in the *Shalyatantra* department S.V.N.H.T's *Ayurved Mahavidyalaya* Rahuri provided the following material & were selected irrespective of their religion, race, occupation etc., fulfilling the selection & eligibility criteria & informed written consent was taken.

Preparation of Drug

Trial drug *Yavakshara* was prepared as classical method mentioned in *Sharangdhar Samhita*⁷ and refilling of *Yavakshara* in a capsule form was prepared at S.V.N.H.T's *Ayurved Mahavidyalaya* Rahuri in *Shalyatantra* department.

Seed of *Yava* (barley) purchased from farmer and dried in sunlight. Impurities were taken out from *Yava* seeds. All the seeds were burnt (fig.2). At the end, burnt ash of *Yava* seeds was collected. This ash is dissolved in water (fig.3) which left for whole night & next day mixture filtered by cotton cloth (fig.4). The above process of filtration was repeated for next 21 days. At the end of 21st day liquid containing fine ash of *Kshara* obtained. The liquid was heated on furnace (fig.5), at the base of pot got fine ash of *Kshara*, this fine ash called *Yavakshara* (fig.6), capsules are prepared in the dose 500mg. (fig.7) *Yavakshara* was sent for standardization in research laboratory.

Table 1: Standardization of Yavakshara

Description	White coloured, crystalline, coarse powder
PH (10% solution)	4.74
Assay for potassium (K)	23.4437%
Assay for Sodium (Na)	0.0843%

Control drug capsule Pyginal 50mg (fig.8) was purchased from serum Institute of India Ltd., medical store of S.V.N.H.T's *Ayurved Mahavidyalaya* Rahuri.

Table 2: Course of administration

	Capsule containing	
	<i>Yavakshara</i>	Pyginal
Dose	500mg BD orally	50mg BD orally
Time of administration	Before meal	After meal
<i>Anupana</i>	<i>Koshnaja</i>	<i>Koshnaja</i>
Duration	1 month	1 month

Total number of 60 patients were studied.

Group A- 30 patients was treated with capsule *Yavakshara* as a trial group.

Group B -30 patients was treated with capsule Pyginal.

Laboratory Investigation

1. Complete blood count
2. Sr. Creatinine
3. Urine Routine & microscopic
4. Blood Urea
5. Prostate Specific Antigen (If Required)
6. Ultra Sonography

Physical examination

- 1) Measurement of residual urine by catheterization
- 2) Uroflowmetry
- 3) Digital rectal examination

Inclusion criteria

- 1) Patient age group of 50-80 year.
- 2) Patient with mild and moderate symptoms according to questionnaire for American urological association score given for BPH.
- 3) Patients of *Samanya Lakshana's* of *Vatashtheela*.

Exclusion of criteria

- 1) Patient having acute urinary retention, stricture of urethra, Ca. prostate, congenital contracture of bladder neck, bladder polyps, cystitis, Hydronephrosis, Urolithiasis.
- 2) Patient with severe systemic disease like cardiac disease, Diabetes Mellitus, Renal failure, HIV-Immuno-compromised patients must be excluded.

Table 3: Criteria of Assessment⁸

	Urinary Symptoms Observed Over The Month Of Treatment From Onset Of Treatment	Grade-0	Grade-1	Grade-2	Grade-3	Grade-4
1.	Frequency- how many times patient have to urinate again less than 2hrs.after finishing urination	Not at all	Less than 7 days	7-15 days	16-21 days	Almost always
2.	Urgency- how many times patient found difficulty to postponed urination	Not at all	Less than 7 days	7-15 days	16-21 days	Almost always
3.	Straining- how many times patient have to strain to begin urination.	Not at all	Less than 7 days	7-15 days	16-21 days	Almost always
4.	Weak Stream- how many times patient found weak urinary stream.	Not at all	Less than 7 days	7-15 days	16-21 days	Almost always
5.	Incomplete Emptying- how many times patient have sensation of not emptying bladder completely after finishing urine.	Not at all	Less than 7 days	7-15 days	16-21 days	Almost always
6.	Nocturia- how many times patient got up to urinate	0-1 Time	2-3 Time	4-5 Times	6-7 Times	More than 7 Times

Assessment of Residual Urine

Grade I	-	0 to 50 ml.
Grade II	-	51 to 100 ml.
Grade III	-	101 to 150 ml.
Grade IV	-	151 to 200 ml.

Assessment of Urine Flow Rate

Grade I	-	15 ml.
Grade II	-	12 to 14 ml.
Grade III	-	09 to 11 ml.
Grade IV	-	06 to 08 ml.
Grade V	-	less than 06 ml.

Obtained Results have been discussed and analyzed on following parameters.

1. Complete Relief - 100% relief.
2. Markedly improvement - more than 50% relief.
3. Improvement - 25-50% relief.
4. Unchanged - upto 25% relief.

Follow up study: 7th day -15th day -21st day -30th days.

OBSERVATION & RESULTS**Table 4: % of Relief According to symptom methodology for Group- A. & Group-B**

S. NO.	Clinical Feature	Group-A				Group-B			
		No.of.pt.	% of relief			No.of.pt.	% of Relief		
			t.val	P<0.05	% of relief		t.val	P<0.05	% of relief
1.	Urgency	30	9.12	H.S	65	30	6.53	H.S	63
2.	Frequency	30	8.92	H.S	54	30	14.39	H.S	64
3.	Straining	30	6.03	H.S	61	30	7.10	H.S	32
4.	Weak stream	30	2.36	H.S	57	30	14.16	H.S	21
5.	Incomplete Emptying	30	3.29	H.S	69	30	10.71	H.S	23
6.	Nocturia	30	4.98	H.S	66	30	9.17	H.S	51
7.	Residual urine	30	14.01	H.S	55	30	7.99	H.S	37
8.	Uroflow rate	30	7.99	H.S	30	30	6.79	H.S	39

(H.S Highly Significant)

Effect of Therapy

Result	Group-A	Group-B
Cured	00	00
Markedly Improved	10	25
Improved	20	05
Unchanged	00	00

DISCUSSION

BPH is a common ailment of elderly population and an advisable treatment of choice is surgery, which is mentally & physically painful. Due to number of complications of operative surgery in old age, old

persons avoid operative treatment for their BPH symptoms & seeking a safe & effective treatment for easy life. In this situation, the medicinal treatment may play an important role.

Hence to avoid surgery and its complication, *Yavakshara* can be used as a medicinal treatment and its action can be given as *Ushna, Tikshna Guna* of *Yavakshara* causes *Lekhana Karma* of *Mamsavaha Srotas* i.e. it reduces the size of hypertrophied prostate gland which relieves urgency & frequency.

Vitiated *Vata Dosha* creates *Kapha Pitta Dushti* because of *Vishamagni*. *Ama* formed due to *Vishamagni* settled at *Basti* causes *Vatashtheela*. Above all *Samprapti Vishamagni* plays important role & *Yavakshara* causes *Agnideepan* due to its *Ushna, Tikshna Guna*. Also *Ushna Tikshna Guna* of *Yavakshara* causes *Strotovivaran* & *Strotoshodhan*⁸ so weak stream, incomplete emptying of bladder, nocturia decreases.

Pyginal is a natural association of substances like Phytosterols, Pentacyclic triterpenes and Ferulic acid Esters of fatty alcohols, with synergistic pharmacological effects on prostate. These constituents are endowed with anti-inflammatory, antiedema and cholesterol lowering action on prostate⁹.

CONCLUSION

Use of *Yavakshara* for BPH can prolong the surgical treatment. Use of *Yavakshara* in early stage of BPH can prevent the further progressive pathology of disease. *Yavakshara* gives symptomatic relief in irritative symptoms like urgency, frequency, nocturia while in straining, weak stream and incomplete emptying of bladder, *Yavakshara* shows less significant effect as these symptoms are obstructive in nature. Pyginal have shown markedly improvement in obstructive and irritative pathology of BPH. Most of the patients having associate symptoms i.e. constipation and *Yavakshara* shown marked improvement for constipation while pyginal does not show any relief in constipation.

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PHOTOGRAPHS

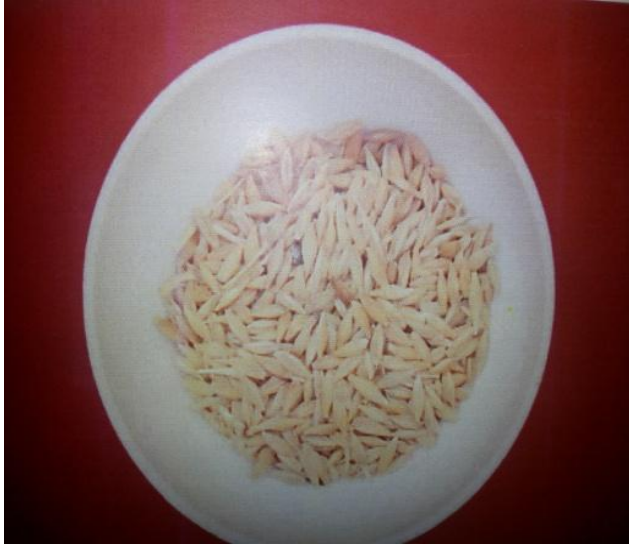


Figure 1. Yava (barley)



Figure 2. Burning of Yava



Figure 3. Dissolution of Ash



Figure 4. Filtration of Mixture



Figure 5. Heating Process



Figure 6. Prepared Yava kshara



Figure 7. Prepared Yava kshara Capsule

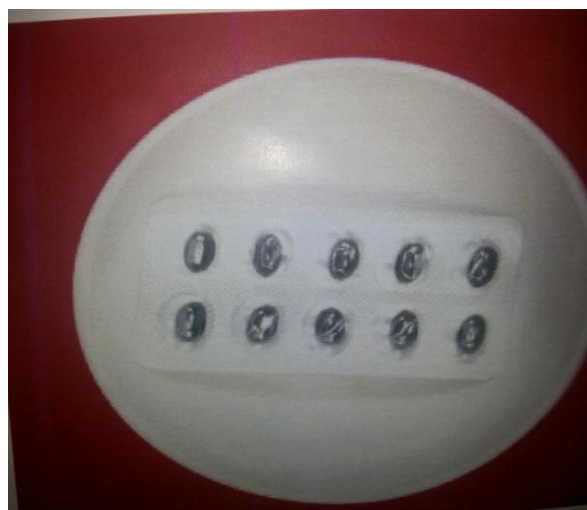


Figure 8. Pyginal Capsule