

# A Clinical Study to Evaluate the Combined Efficacy of Varunadi Gana Siddha Kala Basti Followed by Mustadi Kalka Yoga in the Management of Mutragranthi with Special Reference to Benign Prostatic Hyperplasia

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## ABSTRACT

Benign prostate hyperplasia is a benign enlargement of prostate which usually occurs after 50 years, usually between 60 and 70 year. Mutragranthi is a disease of mutravahasrotas, one among the 12 types of mootraghata disorders elaborated by sushruta. Mutragranthi, as described in ayurveda, closely resembles benign prostatic hyperplasia (bph) of modern medicine in its signs and symptoms. Due to the medical and surgical complications while treating the disease, an ayurvedic approach in the management of bph is required. This study was conducted to evaluate the efficacy of varunad gana siddha kala basti followed by mustadi kalka in the management of bph.

**KEYWORDS:** Mutragranthi, kalabasti, varunadi gana

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## 1. INTRODUCTION

Benign Prostate Hyperplasia is a benign enlargement of prostate which occurs after 50 years, usually between 60 and 70 year. Usually with age testosterone level drops slowly, but fall of estrogen level is not equal. So, the Prostate enlarges through intermediate peptide growth factor<sup>5</sup> that increases pressure on the urethra and results in urinary symptoms such as increased frequency of Micturition, Dysuria, and Urgency.

In Ayurvedic literature urinary outflow dysfunction has been described under the title of Mutraghata,<sup>6</sup> Mutragranthi is one of them. Mutragranthi is small, round and immovable tumor located at vastimukha,

accompanied with severe pain, obstruction of urinary passage and other symptoms as Ashmari.<sup>7</sup>

The prevalence of BPH rises markedly with age. Autopsy studies have observed a histological prevalence of 8%, 50% and 80% in the 4<sup>th</sup>, 6<sup>th</sup> and 9<sup>th</sup> decades of life, respectively.<sup>8</sup>

For mild to moderate symptoms, conservative therapy is used. Recently, 5 alpha reductase inhibitors have been successfully utilized in modern medicine to shrink the prostate. However some adverse effect, such as decreased libido, erectile dysfunction, and

decreased ejaculation have been reported in many patients.

A number of studies have confirmed that Phenoxybenzamine reduces prostatic urethral pressure and significantly improves urinary flow rate. However side effects example orthostatic hypotension, dizziness, tiredness has led to discontinuation of therapy.<sup>9</sup> Hence there is need to explore newer treatment protocol in this area to root out the Disease.

According to Acharya Sushruta “Vata Dosha” is the root cause for the manifestation of all Mutraghata<sup>10</sup> and the principle management of Vata Dosha is Basti Chikitsa.<sup>11</sup> Kapha Dosha and Meda is mainly responsible for Granthi<sup>12</sup> and the drugs of Varunadi gana has properties of Vatahara and Kaphamedohara.<sup>13</sup> Thus by the above references, it seems to be effective on benign prostatic enlargement.

According to Acharya Susruta, Mustadhi kalka was mentioned in the context of Mutraghata as Muta dosha nivarana, it contains Musta, Abhaya, Devadaru, Murva & Muleti<sup>14</sup>

## OBJECTIVE

- To evaluate combined efficacy of varunadi gana siddha kala basti followed by mustadi kalka yoga in the management of mutragranthi w.s.r to benign prostatic hyperplasia

## MATERIALS AND METHODS:

### ➤ Drug source:

Medicines used for present study prepared as per classical methods under the guidance of experts in

### Study Design:

Group	No. of patients	Intervention
Single group	30 patients	Varunadi gana siddha kala basti followed by mustadi kalka yoga

## PLAN OF TREATMENT

### TOTAL STUDY DURATION

- Treatment duration: 44-46 days
- Followup: 16<sup>th</sup> day, 46<sup>th</sup> day
- Total duration of the study: 1 month 16 days

**Table1: Showing intervention**

Deepana pachana	Panchakola churna	03- 05 days
Koshtashodhana	Murchita Eranda taila	01 day
Varunadi gana siddha kala basti	Varunadi gana siddha Niruha basti	10 days
	Anuvasana basti: Varunadi gana siddha taila	
Internal medication	Mustadi kalka	30 days

rasashala of Taranth government ayurvedic medical college and hospital, Ballari.

### ➤ Clinical source:

Total of 30 patients who are diagnosed with Mutragranthi (Benign Prostatic hyperplasia) and who fulfill the inclusive criteria will be selected randomly from the OPD of Taranath Govt. Ayurvedic Medical College and Hospital, Ballari, by conducting special camps.

### Inclusion criteria:

- Patients presenting the clinical features of Mutragranthi (BPH) irrespective of caste, religion and socio-economic status.
- Patients diagnosed with B.P.H. grade 1, 2 and 3.
- Patients between the age group of 40 to 70 years.
- Patients having score mild to moderate in International Prostate Symptoms Score will be included.
- Patients fit for basti.

### Exclusion criteria:

- Patients having Hematuria, Uremia, Septicemia, Renal failure.
- Patients having major systemic illness like TB, uncontrolled Diabetes Mellitus.
- Patients with acute retention of urine who need surgical intervention.

### Investigations:

1. USG of pelvis.
2. PSA TEST (IF REQUIRED)

**Assessment criteria -****SUBJECTIVE CRITERIA:****INTERNATIONAL PROSTATE SYMPTOM SCORE**

Symptoms	Not at all	Less than 1 in 5 times	Less than half the time	About half the time	More than half the time	Almost always	Total score
1. Incomplete Emptying	0	1	2	3	4	5	
2. Frequency	0	1	2	3	4	5	
3. Intermittency	0	1	2	3	4	5	
4. Urgency	0	1	2	3	4	5	
5. Weak stream	0	1	2	3	4	5	
6. Straining	0	1	2	3	4	5	
7. Nocturia (times per night)	0	1 time	2 time	3 time	4 time	5 time or More	

**Total score:** 0-7 =mild symptoms.

8-19=moderate symptoms.

20-35=severe symptoms

Quality of life due to urinary symptoms (if u were spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?)						
Delighted	Pleased	Mostly satisfied	Mixed- about equally satisfied and dissatisfied	Mostly dissatisfied	Unhappy	Terrible
0	1	2	3	4	5	6

**Assessment for subjective parameters**

BT	0 <sup>th</sup> Day
AT	16 <sup>TH</sup> Day
AF	46 <sup>TH</sup> Day

**OBJECTIVE CRITERIA:****ULTRA SONOGRAPHY****1. Assessment of volume of Prostate**

Sl. No	Grade	Prostate volume
1.	Grade 0	Up to 25 cc
2.	Grade 1	25 – 40 cc
3.	Grade 2	40 – 60 cc
4.	Grade 3	More than 60 cc

**2. Assessment of post voids residual urine volume via ultrasonography.**

Sl. No	Grade	Residual urine volume
1.	Grade 0	0 – 50 ml
2.	Grade 1	51 – 100 ml
3.	Grade 2	101 – 150 ml
4.	Grade 3	151 – 200 ml

**3. Assessment for objective criteria-**

BT	0 <sup>th</sup> Day
AT	46 <sup>TH</sup> Day

**RESULTS**

The Assessment parameter like Incomplete emptying, Frequency, Intermittency, Urgency, Weak stream, Straining, Nocturia, IPSS score, Prostate volume score and PVRU score were subjected to Wilcoxon matched pairs test to compare the mean rank within the group and results were analysed.

**Incomplete emptying**

Time points	Mean	SD	Median	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	4.03	0.85	4.00	1.00	1.20	29.75	4.7030	0.0001*
After treatment	2.83	0.83	3.00	0.50				
Before treatment	4.03	0.85	4.00	1.00	2.80	69.42	4.7821	0.0001*
After follow-up	1.23	0.86	1.00	0.50				
After treatment	2.83	0.83	3.00	0.50	1.60	56.47	4.6226	0.0001*
After follow-up	1.23	0.86	1.00	0.50				

**Frequency**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	4.37	0.85	5.00	0.50	1.33	30.53	4.3724	0.0001*
After treatment	3.03	0.76	3.00	0.00				
Before treatment	4.37	0.85	5.00	0.50	3.07	70.23	4.7821	0.0001*
After follow-up	1.30	0.79	1.00	0.50				
After treatment	3.03	0.76	3.00	0.00	1.73	57.14	4.5407	0.0001*
After follow-up	1.30	0.79	1.00	0.50				

**Intermittency score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	1.83	1.98	1.00	2.00	0.80	43.64	3.4078	0.0007*
After treatment	1.03	1.16	0.50	1.00				
Before treatment	1.83	1.98	1.00	2.00	1.47	80.00	3.4088	0.0007*
After follow-up	0.37	0.67	0.00	0.50				
After treatment	1.03	1.16	0.50	1.00	0.67	64.52	3.1798	0.0015*
After follow-up	0.37	0.67	0.00	0.50				

**Urgency score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	3.97	1.07	4.00	1.00	1.73	43.70	4.7030	0.0001*
After treatment	2.23	0.68	2.00	0.50				
Before treatment	3.97	1.07	4.00	1.00	3.17	79.83	4.7035	0.0001*
After follow-up	0.80	0.81	1.00	0.50				
After treatment	2.23	0.68	2.00	0.50	1.43	64.18	4.4573	0.0001*
After follow-up	0.80	0.81	1.00	0.50				

**Weak stream score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	3.10	1.27	3.00	1.00	1.33	43.01	4.6226	0.0001*
After treatment	1.77	0.86	2.00	0.50				
Before treatment	3.10	1.27	3.00	1.00	2.63	84.95	4.6229	0.0001*
After follow-up	0.47	0.51	0.00	0.50				
After treatment	1.77	0.86	2.00	0.50	1.30	73.58	4.5407	0.0001*
After follow-up	0.47	0.51	0.00	0.50				

**Straining score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	0.97	1.81	0.00	0.00	0.37	37.93	2.3664	0.0180*
After treatment	0.60	1.13	0.00	0.00				
Before treatment	0.97	1.81	0.00	0.00	0.80	82.76	2.3668	0.0180*
After follow-up	0.17	0.38	0.00	0.00				
After treatment	0.60	1.13	0.00	0.00	0.43	72.22	2.3662	0.0180*
After follow-up	0.17	0.38	0.00	0.00				

**Nocturia score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	4.13	0.94	4.00	0.50	1.43	34.68	4.6226	0.0001*
After treatment	2.70	0.88	3.00	0.00				
Before treatment	4.13	0.94	4.00	0.50	3.37	81.45	4.7821	0.0001*
After follow-up	0.77	0.63	1.00	0.50				
After treatment	2.70	0.88	3.00	0.00	1.93	71.60	4.6226	0.0001*
After follow-up	0.77	0.63	1.00	0.50				

**IPSS score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	22.70	4.64	22.00	2.50	8.50	37.44	4.7820	0.0001*
After treatment	14.20	2.40	14.50	1.50				
Before treatment	22.70	4.64	22.00	2.50	17.60	77.53	4.7824	0.0001*
After follow-up	5.10	1.81	5.00	1.00				
After treatment	14.20	2.40	14.50	1.50	9.10	64.08	4.7821	0.0001*
After follow-up	5.10	1.81	5.00	1.00				

**EFFECT OF TREATMENT ON OBJECTIVE PARAMETERS-****Prostate volume scores**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	1.30	0.53	1.00	0.50	0.23	17.95	2.3664	0.0180*
After follow up	1.07	0.64	1.00	0.00				

**PVRU score**

Time points	Mean	SD	Media n	IQR	Mean Diff.	% of change	Z-value	P-value
Before treatment	1.40	0.97	1.00	0.50	0.67	47.62	3.6214	0.0003*
After follow up	0.73	0.78	1.00	0.50				

**Overall result -****Table no 2: showing overall result**

No Relief / unchanged	00	0 pt
Mild Improvement	upto 25%	0 pt
Moderate Improvement	26 to 50%	0 pt
Good Improvement	51 to 75%	15 pts
Marked Improvement	75 to 100%	15 pts
C0mplete Improvement	100%	0 pt

**CONCLUSION**

Following conclusions were drawn from the present clinical study with treatment and observations.

Total 30 patients of *MutrAGRAnthi* (BPH) included in this study, which were treated with *Varunadi Gana Shiddha Kala Basti* followed by *Mustadi Kalpa Yoga*.

In the present study it was observed that *MutrAGRAnthi* was common in the age group of 60-70 years.

Occupation wise it was more common in farmers and business men, more in lower socio-economical class and was more in people with mixed dietary habits, irregular dietary habits with much intake of animal protein.

BPH is a disease which gives rise to various signs and symptoms and most of which, are mainly divided into

obstructive and irritative symptoms. The action of drug on both obstructive and irritative symptoms was significant in this study.

Action of drugs on volume of prostate and post void residual urine in the study was significant. During the observational period no recurrence of symptoms was observed.

Action of drug on incomplete emptying, increased frequency, intermittency, urgency, nocturia, weak stream, straining was significant.

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