A Comparative Clinical Study of Basti Karma and Kanchanara Guggulu in the Management of Vataastheela Mutraghata w.s.r. To Benign Prostatic Hyperplasia (B.P.H.)

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ABSTRACT

Benign Prostatic Hyperplasia (BPH) is a major geriatric problem which is described in Ayurveda classics as Vaatastheela, a one type of Mutraghata (obstructive uropathy). Total twelve types of Mutraghata are described as obstructive uropathy related to either upper or lower urinary tract. The Vatastheela Mutraghata reflects the symptoms of urinary retention, incomplete voiding, distension etc. These are features of Lower Urinary Tract Symptoms (LUTS) and can be co-related with Benign Prostatic Hyperplasia. In modern medicine, various conservative and surgical treatment modalities are available with the varying degree of success rate for the management of LUTS caused by enlarged gland. Similarly in Ayurveda, various researches are going on to find out a suitable and less invasive treatment modality for the same. In Sharangadhar Samhita, Kaanchara Guggulu was mentioned with Granthihar property for the treatment of Granthi. In the Sushruta Samhita, the choice of treatment for Mutraghata is Basti Karma as Shodhan Chikitsa. In this case series 30 well diagnosed cases of BPH were treated with Kaanchanar Guggulu and Yoga Basti Then patients were assessed on the basis of subjective parameters like International Prostate Symptom Score (IPSS), Quality of Life (QOL) Score and objective parameters like prostate size, post void residual urine volume (PVR) and peak urine flow rate (Qmax). After completion of treatment significant results were observed in both subjective and objective parameters. This case series highlights the fact that the BPH can be managed in Ayurveda by simple and minimal invasive measures.

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Keywords: Benign Prostatic Hyperplasia, Vaatashtee-la Mutraghata, Basti Karma

Introduction:

Vatastheela is a disease of Mutravahasrotas (urinary tract), one among the 12 types of Mutraghata (obstructive uropathy) disorders elaborated by Acharya Sushruta, closely resembles to Benign Prostatic Hyperplasia (BPH) of modern medicine in its signs and symptoms.

The Vatastheela Mutraghata reflects the symptoms of urine retention, incomplete voiding, dribbling, hesitancy, dysuria, straining during urination etc[1]. These are features of Lower Urinary Tract Symptoms and can be co-related with Benign Prostatic Hyperplasia in modern parlance.

Benign Prostatic Hyperplasia (BPH) is a senile disorder and chiefly affects individuals above the age of 40 years. The overall incidence rate of BPH is 15 per 1000 men per year. At the beginning of 4th decade of life only 8% of men have histological evidence of BPH. 50% of men aged 51-60 years and 90% of men over the age of 80 years have histological evidence of BPH.[2]

Clinical features of BPH are increased frequency of micturition, nocturia, incomplete voiding, incomplete emptying of bladder, intermittency, urgency, hesitancy, weak stream of urine, straining during micturition etc. And often features of acute or chronic retention of urine and uraemia also occurs during progression of disease.

In modern medicine the management of BPH is either through a surgical approach (e.g., open prostatectomy, transurethral resection of prostate, cryotherapy, etc.) or by conservative treatment using drugs (e.g. chemotherapy, hormonal therapy, etc.).

Among the many approaches, prostatectomy is the best, but it is associated with many complications, e.g. postoperative morbidity, impotence, retrograde ejaculation etc.

The second most acceptable procedure is TURP, transurethral resection of prostate, which is also not free from complications, with the cumulative probability of re-operation estimated to be around 15% at 5–8 years after TURP.

In case of hormonal therapy, although there are some advantages, there are many complications like loss of libido, retrograde ejaculation, impotence, gynecomastia etc. Generally, the conservative treatments mentioned above have to be continued indefinitely and therefore, treatment can be expensive.

In this situation, it is possible that Ayurveda will be able to provide a treatment that is natural, safe, simple, less invasive, effective and free from any adverse effects.

The vata dosha is the main culprit to produce the vatastheela mutraghata (BPH). Hence the line of treatment instituted in BPH is vatashamak and vatanulomaka. And Bastikarma is best in management of vata dosha. That is why Bastikarma is selected in management of BPH. In Sharangadhar Samhita, Kaanchara Guggulu was mentioned with Granthihar property for the treatment of Granthi.[3]

So here we present a case series of 30 patients with BPH who were managed effectively with the simple and less-invasive procedure, Kaanchnar Guggulu and Basti Karma.

Clinical Study

I. Study Design

- It was an randomized controlled clinical trial, with approval from IEC in 2015. (Ref No. 43) For this study 30 patients were take up in two group i.e. 15 patients in each group, the signs and symptoms before and after treatment were observed, and recorded in the mentioned proforma of the case sheet of BPH.

- Grouping - There will be two groups

Table I : Groups of Clinical Trial

<table>
<thead>
<tr>
<th>Arms</th>
<th>Assigned interventions</th>
</tr>
</thead>
</table>
| **Group A** - 15 patients  
Controlled comparator | 1 gm (2 tab of 500mg each) thrice a day with lukewarm water ½ hour before meal, Orally |
| **Kanchanar Guggulu** | |
| **Group B** – 15 patients  
Experimental- **Yoga Basti** | 5 Anuwasana Basti and 3 Niruha Basti (2 settings) |

II. Time Frame : 3 months (Trial period: 1 month + Follow up - 2 months

III. Materials: Drugs used in this study for management of BPH

1. **Kanchanara Guggulu**
   - **Dose:** 1 gm (2 tablets of 500 mg each)
   - **Dosage form:** Tablets of 500 mg
   - **Route of Administration:** Oral

2. **Yoga Basti** - combination of 3 Niruha Basti and 5 Anuvasana Basti

Table II: Niruha Basti[4] With Dashmoola Kwatha

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Ingredients</th>
<th>Quantity</th>
<th>Altered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Quantity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quantity</td>
</tr>
<tr>
<td>1.</td>
<td>Makshika/honey</td>
<td>3 palas (150ml)</td>
<td>150ml</td>
</tr>
<tr>
<td>2.</td>
<td>Saindhava lavana</td>
<td>½ karsa (7.5gm)</td>
<td>7.5gm</td>
</tr>
<tr>
<td>3.</td>
<td>Sneha (Eranda tail)</td>
<td>3 palas (150ml)</td>
<td>150ml</td>
</tr>
<tr>
<td>4.</td>
<td>Kalka (Satapushpa.)</td>
<td>2 palas (100gms)</td>
<td>30 gm</td>
</tr>
<tr>
<td>5.</td>
<td>Kashaya(dashmoola kshya)</td>
<td>10 palas (500 ml)</td>
<td>400ml</td>
</tr>
<tr>
<td>6.</td>
<td>Total (approximately)</td>
<td>18 palas (900ml)</td>
<td>700ml</td>
</tr>
</tbody>
</table>
A Comparative Clinical Study of *Basti Karma* and *Kanchanara Guggulu* in the Management of *Vataastheela Mutraghata* w.s.r To Benign Prostatic Hyperplasia (B.P.H.), JOA XIII-2, 2019; 53 - 66


<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Ingredients</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dhanvantara Taila</td>
<td>60 ml</td>
</tr>
<tr>
<td>2.</td>
<td>Saindhava Lavan</td>
<td>2 gm</td>
</tr>
<tr>
<td>3.</td>
<td>Shatapushpa Powder</td>
<td>4 gm</td>
</tr>
</tbody>
</table>

**IV. Selection Criteria**

- Diagnosis was made on the basis of symptoms of LUTS due to BPH such as increased frequency of urination, urgency, nocturia, intermittency, incomplete emptying of bladder, poor stream of urine, strangury, dribbling etc.
- Digital rectal examination suggestive of Prostatomegaly due to BPH.

**Inclusion Criteria**

- Patients with age above 40 years.
- Patients with International Prostate Symptoms Score (IPSS) > 7
- Rectal examination consistent with Benign Prostate Hypertrophy (BPH)
- Prostate volume > 15cc
- Prostate Specific Antigen (PSA) < 4ng/ml
- Urine flow rate of <15ml/sec for 2 voids
- Willing and able to participate in the study for 16 weeks

**Exclusion Criteria**

- Patients aged below 40 years
- Patients currently using any other conservative treatment for the BPH/Hair loss
- Patients having other urinary system pathology like severe urinary tract infection, urinary calculi, urethral stricture etc.
- Patients suffering from malignancy of urogenital system like Ca of Prostate..
- Patients having congenital deformity of urogenital tract.
- BPH with any obstructive uropathy.
- Serum Prostate Specific Antigen (PSA) > 4 ng/ml
- Chronic retention of urine (Post voidal urine volume > 300ml)

**V. Lab Investigations**

- Routine investigations (CBC, ESR, RBS, HIV, HBsAg, RFT, LFT, CUE)
- USG (KUB with PVR)
- Uro-flowmetry
- PSA (according to necessity)
- Urine C/S (according to necessity)

**VI. Assessment Criteria**

**Subjective Criteria:** IPSS: The severity of BPH can be determined with the International Prostate Symptom Score (IPSS)/American Urological Association Symptom Index (AUA-SI) plus a disease-specific quality of life (QOL) question. Questions on the AUA-SI for BPH concern the following:

- Incomplete emptying
- Frequency
- Intermittency
- Urgency
- Weak stream

- Straining
- Nocturia

**Objective Criteria**

- Size of prostate
- Residual urine volume
- Average flow rate by uro-flowmetry

**Grading of Parameters of Assessment**[^7]

**International Prostate Sympton Score (I-PSS)**

<table>
<thead>
<tr>
<th>Patient Name: ___________________</th>
<th>Date Of Birth: ___________________</th>
<th>Date Completed: ___________________</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>In the past month:</th>
<th>Not at all</th>
<th>Less than 1 in 5 Times</th>
<th>Less than Half the Times</th>
<th>About Half the Times</th>
<th>More than Half the Times</th>
<th>Almost Always</th>
<th>Your Score</th>
</tr>
</thead>
</table>
| **1. Incomplete emptying**
  How often have you had the sensation of not emptying your bladder? | 0 | 1 | 2 | 3 | 4 | 5 |
| **2. Frequency**
  How often have you had to Urinate less than every two hours? | 0 | 1 | 2 | 3 | 4 | 5 |
| **3. Intermittency**
  How often have you found you stopped and started again several times when you urination? | 0 | 1 | 2 | 3 | 4 | 5 |
| **4. Urgency**
  How often have you found it difficult to postpone urination? | 0 | 1 | 2 | 3 | 4 | 5 |
| **5. Weak Stream**
  How often have you had a weak urinary stream? | 0 | 1 | 2 | 3 | 4 | 5 |
| **6. Straining**
  How often have you had to strain to start urination? | 0 | 1 | 2 | 3 | 4 | 5 |
| **7. Nocturia**
  How many times did you typically get up at night to urinate? | 0 | 1 | 2 | 3 | 4 | 5 |

[^7]: International Prostate Sympton Score (I-PSS)

### Total I-PSS Score

<table>
<thead>
<tr>
<th>Score:</th>
<th>1 - 7 Mild</th>
<th>8 - 19: Moderate</th>
<th>20 - 35: Severe</th>
</tr>
</thead>
</table>

### Quality of Life Due to Urinary Symptoms

<table>
<thead>
<tr>
<th>Delighted</th>
<th>Pleased</th>
<th>Most Satisfied</th>
<th>Mixed</th>
<th>Mostly Dissatisfied</th>
<th>Unhappy</th>
<th>Terrible</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?**

**Grading of Parameters of Assessment**

**1. International Prostate Symptoms Score (IPSS)**

- Grade 0 : Mild Score (1-7)
- Grade 1 : Moderate Score (8-19)
- Grade 2 : Severe Score (20-35)

**2. Prostatomegaly**

- Grade 0 : <15gm
- Grade I : 16-25gm
- Grade II : 26-50gm
- Grade III : 51-75gm
- Grade IV : 76-100gm
- Grade V : >100gm

**3. Post Void Residual Volume of Urine (PVR)**

- Grade 0 : Nil
- Grade 1 : up to 50ml
- Grade II : 51-100ml
- Grade III : 101-150ml
- Grade IV : 151-200ml
- Grade V : >200ml

**4. Peak Urine Flow Rate (Qmax)**

- Grade 0 : >15ml/sec

**Observations**

For this study total 40 patients with LUTS were registered, among them 30 patients completed the treatment as 10 patients were withdrawn from study due to development of features of exclusion criteria. All the selected patients were thoroughly examined and diagnosed based on exclusive and inclusive criteria. All the 40 patients of BPH were analysed for their age, occupation, habitat, Prakriti, etc. Hence, observation of 40 patients and results of 30 patients are presented here.

In this series of male patients, maximum number of patients 26 (60%) were belong to age group of 51-70 years, maximum 25 (62.5%) patients were Hindu while 15 (37.5%) patients were Muslim, maximum 37 (92.5%) patients were married while 3 (7.5%) patient were unmarried, maximum 17 (42.5%) patients were from agriculture occupation, maximum patients of this series i.e. 17 (42.5%) came from lower middle class of the society, 23 (57.5%) patients were vegetarian, maximum 31 (77.5%) were having disturbed sleep, maximum 47.5% patients were with pitta-kapha prakriti, and maximum

19 patients (47.50%) were having chronicity of lower urinary tract symptoms from 13-24 months.

Maximum of patients 62.5% were with severe form of disease. (IPSS Score 20-35) Maximum patients (40%) were mostly dissatisfied (QOL Score 4) from their poor quality of life due to symptoms of disease. In our study it was observed that maximum 17 patients (42.50%) of BPH had Grade II Prostatomegaly (Prostate weight 26-50gm).

In this study it was observed that maximum 12 patients (30%) were with grade III PVR (Post Void Residual Urine Volume 100-150ml). In Our study maximum 15 patients (37.5%) were with grade IV Qmax (urine flow rate 4-6 ml/sec). Among the 7 symptoms mentioned in IPSS score, Intermittency was most severe complaint of patients with 76% severity and Urgency was least severe complaint with 31.20% severity.

Results

Table IV- Results of Group A : Kaanchanar Guggulu

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Parameter of assessment</th>
<th>Mean BT</th>
<th>Mean AT</th>
<th>Mean Difference</th>
<th>% Relief</th>
<th>SD</th>
<th>SE</th>
<th>P Value</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Incomplete emptying</td>
<td>2.60</td>
<td>2.33</td>
<td>0.2667</td>
<td>10.26</td>
<td>0.4577</td>
<td>0.1182</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>2.</td>
<td>Frequency</td>
<td>3.53</td>
<td>3.20</td>
<td>0.3333</td>
<td>9.43</td>
<td>0.6172</td>
<td>0.1594</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>3.</td>
<td>Intermittency</td>
<td>3.80</td>
<td>3.00</td>
<td>0.8000</td>
<td>21.05</td>
<td>0.8619</td>
<td>0.2225</td>
<td>&lt;0.01</td>
<td>VS</td>
</tr>
<tr>
<td>4.</td>
<td>Urgency</td>
<td>1.67</td>
<td>1.20</td>
<td>0.4667</td>
<td>27.99</td>
<td>0.6399</td>
<td>0.1652</td>
<td>&lt;0.05</td>
<td>S</td>
</tr>
<tr>
<td>5.</td>
<td>Weak stream</td>
<td>3.53</td>
<td>2.87</td>
<td>0.6667</td>
<td>18.87</td>
<td>0.7237</td>
<td>0.1869</td>
<td>&lt;0.01</td>
<td>VS</td>
</tr>
<tr>
<td>6.</td>
<td>Straining</td>
<td>3.60</td>
<td>2.87</td>
<td>0.7333</td>
<td>20.36</td>
<td>0.7988</td>
<td>0.2063</td>
<td>&lt;0.01</td>
<td>VS</td>
</tr>
<tr>
<td>7.</td>
<td>Nocturia</td>
<td>3.60</td>
<td>3.27</td>
<td>0.4000</td>
<td>11.08</td>
<td>0.7368</td>
<td>0.1902</td>
<td>&gt;0.05</td>
<td>NS</td>
</tr>
<tr>
<td>8.</td>
<td>IPSS</td>
<td>1.80</td>
<td>1.47</td>
<td>0.3333</td>
<td>18.52</td>
<td>0.4880</td>
<td>0.1260</td>
<td>&lt;0.1</td>
<td>NQS</td>
</tr>
<tr>
<td>9.</td>
<td>QOL</td>
<td>4.13</td>
<td>3.47</td>
<td>0.6667</td>
<td>16.13</td>
<td>0.7237</td>
<td>0.1869</td>
<td>&lt;0.01</td>
<td>VS</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter of assessment</th>
<th>Mean Difference</th>
<th>% Relief</th>
<th>SD</th>
<th>SE</th>
<th>P Value</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Incomplete emptying</td>
<td>2.80</td>
<td>1.067</td>
<td>38.10</td>
<td>0.7988</td>
<td>0.2063</td>
<td>0.0010</td>
</tr>
<tr>
<td>2</td>
<td>Frequency</td>
<td>3.47</td>
<td>1.667</td>
<td>48.08</td>
<td>1.113</td>
<td>0.2873</td>
<td>0.0010</td>
</tr>
<tr>
<td>3</td>
<td>Intermittency</td>
<td>3.80</td>
<td>1.200</td>
<td>31.57</td>
<td>1.082</td>
<td>0.2795</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>4</td>
<td>Urgency</td>
<td>1.47</td>
<td>0.600</td>
<td>40.89</td>
<td>0.5071</td>
<td>0.1309</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>5</td>
<td>Weak stream</td>
<td>3.73</td>
<td>1.200</td>
<td>32.15</td>
<td>0.9411</td>
<td>0.2430</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>6</td>
<td>Straining</td>
<td>3.60</td>
<td>1.067</td>
<td>29.64</td>
<td>0.8837</td>
<td>0.2282</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>7</td>
<td>Nocturia</td>
<td>3.60</td>
<td>1.733</td>
<td>48.14</td>
<td>1.163</td>
<td>0.3003</td>
<td>0.0010</td>
</tr>
<tr>
<td>8</td>
<td>IPSS</td>
<td>1.73</td>
<td>0.7333</td>
<td>40.74</td>
<td>0.5936</td>
<td>0.1533</td>
<td>&lt;0.01</td>
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</table>
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### Table VI- Results of Inter Group Comparison of Group A & Group B

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameter of assessment</th>
<th>Group</th>
<th>Mean (BT-AT)</th>
<th>SD</th>
<th>SE</th>
<th>P</th>
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<tbody>
<tr>
<td>9.</td>
<td>QOL</td>
<td></td>
<td>4.33</td>
<td>2.60</td>
<td>1.733</td>
<td>39.99</td>
<td>0.1163</td>
</tr>
<tr>
<td>10.</td>
<td>Prostate size</td>
<td></td>
<td>2.67</td>
<td>2.53</td>
<td>0.1333</td>
<td>4.90</td>
<td>0.3519</td>
</tr>
<tr>
<td>11.</td>
<td>PVR</td>
<td></td>
<td>2.67</td>
<td>1.27</td>
<td>1.400</td>
<td>52.40</td>
<td>0.9856</td>
</tr>
<tr>
<td>12.</td>
<td>Qmax</td>
<td></td>
<td>3.53</td>
<td>2.27</td>
<td>1.267</td>
<td>35.89</td>
<td>0.9612</td>
</tr>
</tbody>
</table>

**QOL**

<p>| | | | | | | | | |</p>
<table>
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<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>9.</td>
<td>QOL</td>
<td>4.33</td>
<td>2.60</td>
<td>1.733</td>
<td>39.99</td>
<td>0.1163</td>
<td>0.3003</td>
<td>0.0010</td>
</tr>
<tr>
<td>10.</td>
<td>Prostate size</td>
<td>2.67</td>
<td>2.53</td>
<td>0.1333</td>
<td>4.90</td>
<td>0.3519</td>
<td>0.0908</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>11.</td>
<td>PVR</td>
<td>2.67</td>
<td>1.27</td>
<td>1.400</td>
<td>52.40</td>
<td>0.9856</td>
<td>0.2545</td>
<td>0.0010</td>
</tr>
<tr>
<td>12.</td>
<td>Qmax</td>
<td>3.53</td>
<td>2.27</td>
<td>1.267</td>
<td>35.89</td>
<td>0.9612</td>
<td>0.2482</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Discussion

I. Discussion of Improvement in Parameter of Assessment

Effect of Kanchanara Guggulu and Yoga Basti on 30 patients of Vataastheela (BPH) are discussed below-

1. Incomplete Emptying
   Group B showed better results on incomplete emptying with 38.10% than group A with 10.26% along with very significant variation on inter group comparison with P value <0.01.

2. Frequency of Urination
   Group B showed better improvement on frequency of urination with 48.08% relief than group A with 9.43% relief along with statistically not significant variation on inter group comparison with P value >0.05.

3. Intermittency
   Group B yielded better outcome with 31.57% relief on intermittency while group A 21.05% which have not significant variation statistically on inter group comparison with P value >0.05.

4. Urgency of Urination
   Group B provided better improvement with 40.89% relief than group A with 27.99% which have not significant variation on inter group comparison with P value >0.05.

5. Weak Stream
   Improvement in group B on weak stream was better with 32.15% than group A with 18.87% which have not shown significant difference on intergroup comparison with P value >0.05.

6. Straining
   Straining was relieved much better in group B with 29.64% relief than group A with 20.36% along with no significant variation on intergroup comparison with P value >0.05.

7. Nocturia
   Relief in nocturia was more in group B with 48.14% than group A with 11.08% which have very significant variation on intergroup comparison with P value <0.01.

   Kaanchanar Guggulu showed significant improvement in obstructive symptoms (intermittency, weak stream, straining) while it had almost no effect on irritative symptoms (incomplete emptying, frequency, urgency, nocturia). This is probably due to granthihar and vatanuloman property of kaanchnar guggulu.

   As granthihar property of kaanchnar guggulu was not reflected in assessment parameters as size of prostate gland was almost unchanged during trial and follow up period. But by observing clinical improvement in obstructive symptoms it can be concluded that it might

<table>
<thead>
<tr>
<th>9.</th>
<th>QOL</th>
<th>Group A</th>
<th>0.6667</th>
<th>0.7237</th>
<th>0.1869</th>
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<td>1.163</td>
<td>0.3003</td>
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<td>0.4140</td>
<td>0.1069</td>
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<td></td>
<td>Group B</td>
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<td>0.3519</td>
<td>0.09085</td>
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<td>0.6172</td>
<td>0.1594</td>
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<td>0.2545</td>
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<td>0.5164</td>
<td>0.1333</td>
<td>0.05</td>
<td>S</td>
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<tr>
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<td></td>
<td>Group B</td>
<td>1.267</td>
<td>0.9612</td>
<td>0.2482</td>
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have done the vataanuloman of apana vaayu by pacifying the vitiated vata dosha.

As Apanana vaayu is responsible for all adhovega samyaka pravritti i.e. better unobstructed flow of urine, stool, semen and even child during delivery. And vitiation of vata dosha is main factor responsible for manifestation of BPH. Hence pacifying Vata Dosha by Vatanulomana resulted in better emptying of bladder with improved unobstructed flow of urine.

**Yoga Basti** showed very significant improvement in both type of symptoms either it obstructive or irritative. All of the seven symptoms of Prostatism or LUTS responded significantly after treatment with basti karma. This effect is probably due to systemic effect along with local effects of yoga basti.

Systemically Yoga Basti acted by rectal absorption of Basti dvayam from internal and external haemorrhoidal plexus then interacting with enteric nervous plexus of intestine. According to ayurvedic ideology basti also works systemically as it is best Vatashamaka method for vata pacification.

Along with systemic effect Basti also have local effect on prostatic muscle fibres. Basti relived the prostatic muscle fibres spasm over bladder neck which resulted in proper improved flow of urine.

Hence Basti have both properties, vatashaman systemically and muscle fibres relaxation locally. That dual effects of basti might be responsible for the significant results obtained after treatment with basti karma.

**VII. International Prostate Symptoms Score (IPSS)**

IPSS Score was improved much better in group B with 40.74% relief than group A with 18.52% along with not quite significant variation on intergroup comparison with P value <0.1.

Here we can conclude that Kaanchanar Guggulu and Yoga Basti both are effective in improvement on IPSS score. As yoga basti is more effective in improving IPSS score as it have both vatanulomana and prostatic muscle fibres relaxation property while Kaanchanar Guggulu only have vatanuloman property.

But statistically both group have not quite significant variation due to broad spectrum grading of IPSS Score. As Yoga Basti improved the IPSS score in better way than Kaanchanar Guggulu but it could not be reflected statistically in spite of significant reduction in IPSS score as the grading of IPSS Score was remained same due to broad spectrum grading.

**VIII. Quality Of Life (QOL) Score**

Improved in QOL score is more pronounced in group B with 39.13% relief than group A with 16.13% relief which have significant variation statistically on intergroup comparison with P value <0.05.

QOL score was improved significantly after treatment with Yoga Basti as it relieved both type of symptoms either irritative or obstructive while Kaanchanar Guggulu relieved only obstructive symptoms. So improvement in QOL score was more in Yoga Basti.

**IX. Size of Prostate**

Both group showed almost same results on size of prostate gland with group A, with 7.69% relief, is slightly better than group B with 4.9% relief which have not significant variation on statistical analysis on intergroup comparison with P value >0.05.

Hence these data shows that both groups showed no tendency towards reduction in size of prostate in response to treatment as difference between results in both the groups are not significant.

Most of the patients were improved clinically which was reflected in the form of their reduced IPSS Score or reduced PVR or improved Qmax but their size of prostate gland remained almost constant in entire trial period.

This concludes that prostate size has no significant role in severity and management of the disease and can be managed effectively without reducing the size of the prostate gland.
X. Post Void Residual Volume of Urine (PVR)

Group B showed significant improvement on PVR with 52.40% relief than group A with 13.94% which have very significant variation on intergroup comparison with P value <0.01

*Basti Karma* had shown better effect on PVR the probable mode of action and as it relieved the spasm of prostatic muscle fibres over bladder neck which lead to improved flow and better emptying of bladder during urination ultimately resulted in reduced Post void residual volume of urine.

XI. Peak Urine Flow Rate (Qmax):

Both group showed tendency towards improvement in Qmax as improvement was more pronounced in group B with 35.89% relief compared to group A with 18.20% relief which have significant variation on intergroup comparison with P value <0.05. This might be due to better relaxation of sphincter vasicae due to reduction in prostatic muscle fibres spasm.

**Probable Mode of Action of Kanchnar Guggulu**

Kanchanara Guggulu was selected for the present study which is mentioned, in the context of *Galganda Chikitsa Prakaranam* in Sharangdhar Samhita.

- **Mode of Action of Drug**

Kanchanra Guggulu having Granthihara property and Vatashteela is having Astheelaivat Unnata granthi in between the Basti and Shakrit Marga leading to mutravarodha and Vata is the main Dosha involved, it helped in relieving of obstruction in between the Basti and Shakrit Marga probably by its granthihar property. It increased the intra luminal pressure, relaxed the internal sphincter tone, and as it has Katu Rasa, it contains Marga Shodhaka property and helped in relieving obstruction and in easy flow of urine. It has Vatakaphagna property along with vataanulomana. Hence by pacification of the vata and kapha dosha along with Vatanulomana of apaan vata, it reduced the severity of Vataastheela.

So Kaanchanar Guggulu may be helpful in prevention of growth of prostate with reduction of its size and thereby improving flow rate. As 5-Alpa Reductase Inhibitors drugs need to be taken for at least 6 months to reflect this effect on therapeutically. When these drugs are taken for a year, they result in a 25 percent shrinkage of gland.[8] So Kaanchanar Guggulu may have reduce the size of prostate also if it is taken for such type of long duration like one year.

**Probable Mode of Action of Basti**

The inferior mesenteric vein drains blood from the rectum, sigmoid colon and descending colon. It begins as the superior rectal vein from the upper part of the internal rectal venous plexus. In the plexus it communicates with middle and inferior rectal veins. The superior rectal vein continues upward as inferior mesenteric vein and open into splenic vein. The superior mesenteric vein and splenic vein form portal venous system.[9]

Based on the above mentioned facts we can explain that the active principle from Basti Dravyas inserted into the sigmoid colon via anus is absorbed through rectal veins and via portal vein it spreads to whole body and produces its effect.

- **Systemic Action of Basti:**

The *Virya* of Basti administered through the *Basti* into the Pakvashaya reaches the whole body through the channels (Srotasa), as the active principles in the water when poured at the root of the tree reaches the whole plant.[11]

- **Eliminative or Purificative Action of Basti:**

*Basti* administered into Pakvashaya draws the Dosha/Mala from all over the body from the foot to the head by the virtue of its *Virya*, just as the sun situated in the sky draws the moisture from the earth by its heat.

- **Action of Basti on Vayu:**

Vayu is considered to be the main controller of the body. Now if Vayu alone or in combination with other Dosha get vitiated, then Basti by the way of evacuation or elimination normalizes the path of Vayu along with Pitta, Kapha and faecal matter.
**Conclusion**

BPH is age dependent disease which invariably manifests as man grow older as LUTS. LUTS are classified under two categories-

- **Obstructive Symptoms** (Intermittency, weak stream of urine, straining during urination)-These symptoms are caused by obstruction to the flow of urine due to pressure exerted over urethra either by enlarged prostate gland or prostatic spasm.

- **Irritative Symptoms** (Frequency of urination, urgency, nocturia, feeling of incomplete emptying)-These symptoms are caused by retained post void residual volume of urine either due to formation of post prostatic pouch in the bladder due to intravesical projection of prostate or obstruction to the flow of urine.

- **Kaanchanra Gugglu** is significantly effective in controlling in obstructive symptoms however its efficacy was not observed in relieving the Irritative symptoms.

- **Yoga Basti** is significantly effective in controlling in obstructive symptoms as well as Irritative symptoms. Although its effectiveness is significant in relieving both type of symptoms, either obstructive or irritative but statistically it is more significantly effective in controlling the irritative symptoms than obstructive symptoms. Hence **Yoga Basti** is more effective than **Kaanchanar Guggulu** in the management of **Vatashtheela Mutraghata**

**References**

6. Shrilaxmipati Shastri, Yogaratnakara, Uttarardha, Chaukhambha publication, Chapter 8, Shloka 1-3, Page no. 60

**Abstract**

वाताशील वृद्धावस्था में होने वाली प्रमुख व्याधि है जो आयुर्वेद वाक्यमय में वर्णित १२ प्रकार के मूत्राघात में से एक है। उच्च स्तर निर्भरता और बुखार तन्त्र के मूत्रव्रोध को कुल १२ प्रकार के मूत्राघात के रूप में वर्णित किया गया है। मूत्र अप्रौंति, अर्धश्चुर्गुंठि मूत्र नियमान, आघात इत्यादि वाताशील वृद्धावस्था मूत्राघात के प्रमुख लक्षण है। यह लक्षण आयुर्विज्ञानीय चिकित्सा विज्ञान में वर्णित विनाइन प्रोटेस्टिक हाइपरप्लेसिया (BPH) के निम्न मूत्रवह स्थलस्थ लक्षण से मेल खाते हैं। अतः वाताशील वृद्धावस्था को विनाइन प्रोटेस्टिक हाइपरप्लेसिया से सह-सम्बन्धित किया जा सकता है। आयुर्विज्ञानीय चिकित्सा विज्ञान में इस व्याधि के लक्षणों की चिकित्सा के लिए विविध तरह की आयुर्विज्ञानीय तथा शरीर चिकित्सा विविध तरह के परिणामों के साथ प्रबलत है। आयुर्वेद में भी इस व्याधि की उचित चिकित्सा हेतु निरंतर प्रयास आवश्यक हो रहा है। इसी क्रम में इस चिकित्सकीय अनुसंधान में वाताशील रोग के ३० रोगियों की चिकित्सा कांचबांग गुड़गुड़ और योग बस्ती से की गयी। शास्त्रीय साहित्य में कांचबांग गुड़गुड़ प्रशिक्षण गुणधर्म के साथ सम्पर्क में रोग की चिकित्सा में वर्णित है। तुरुण सहित होता है बस्ति कर्म को मूत्राघात को शोधन चिकित्सा के रूप में उत्तम चिकित्सा के रूप में वर्णित किया गया है। इस चिकित्सकीय अनुसंधान में वाताशील रोग के ३० रोगियों की चिकित्सा कांचबांग गुड़गुड़ और योग बस्ती से की गयी। फिर रोगियों का चिकित्सकीय आंकलन अंतराष्ट्रीय प्रोटेस्ट लक्षण स्कोर, जीवन की गुणवत्ता स्कोर, प्रोटेस्ट ग्रुद्धि का आकार, मूत्र नियमान प्रशिक्षण नूतन आयुर्वेद में नया मूत्र का आयुर्वेद, और अभिकल्पन मूत्र प्रवाह दर के आधार पर किया गया। चिकित्सा समाप्ति के प्रशिक्षण प्राप्त महत्वपूर्ण परिणामों का विस्तारण कर के यह निष्कर्ष निकाला गया कि वाताशील वृद्धावस्था की चिकित्सा कांचबांग गुड़गुड़ और बस्ति कर्म की सहायता से उत्तम रूप से की जा सकती है।