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Management of *Mootraghata* (Benign Prostatic Hyperplesia) with herbal remedies- A pilot study

Research article

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Abstract:

Mootraghata (Benign Prostatic Hyperplesia i.e. BPH) is a senile disorder affects above 40 years of age, having symptoms like retention, incomplete voiding, dribbling, hesitancy, incontinence of urine, etc. Conservative treatment and surgical interventions for BPH with modern medicines are not free from side effects. So in this age group, there is a need for safer alternative method of management. Total 10 patients having signs and symptoms of *mootraghata* / BPH were selected from OPD and IPD of *Shalya Tantra*. In this regard, herbal drug *Kanchanar Guggulu* (500 mg TID orally), and *Dhanyaka Gokshura Ghrita matra basti* (60 ml OD) tried in this study. The treatment was given for 21 days and assessed as per gradation adopted. Finally study has concluded that *Kanchanar Guggulu* & *Dhanyaka Gokshura Ghrita matra basti* is effective in symptomatic relief in *mootraghata*.

Key Words: Benign Prostatic Hyperplasia, *Dhanyaka Gokshura Ghrita, Kanchanar Guggulu, Matra basti, Mootraghata,*

Introduction:

Benign Prostatic Hyperplesia is excessive growth of prostatic tissue and is found mostly in old age men which affects above the age of 40 years. (1) In modern medicine the management of BPH is hormonal therapy, chemotherapy and finally surgical interventions like open prostatectomy, Trans Urethral Resection of Prostate (TURP), cryotherapy. (2) In old age the surgery is associated with many complications like postoperative morbidity, impotence, retrograde ejaculation and sometimes incontinence of urine. (3)

In classics the causes of *mootraghata* are deranged function of *vayu*, particularly *apana vayu and basti (matra basti)* is authentic treatment for vitiated *vayu.*(4) In *samprapti* (pathogenesis) of *mootraghata* (BPH) *mootravaha srotodushti* leads due to vitiation of *vata* and *kapha* dosha. So, *Vata kapha Shamaka* drugs along with *matra basti* help in reducing the size of the prostate and enhancing the tone of urinary bladder. Considering these properties, herbal drug *Kanchanar Guggulu* and *Dhanyaka Gokshura Ghrita* for *matra basti* were tried in this study. (5, 6) The aim and objective of this study is to validate the effect of *Kanchanar Guggulu* and *Dhanyaka Gokshura Ghrita matra basti* in the management of *mootraghata*/BPH.

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Materials and methods:

Total 10 patients having signs and symptoms of *mootraghata* / BPH were selected from OPD and IPD of Shalya Tantra.

Inclusion Criteria:

Male patients of age above 50 years having signs and symptoms of *mootraghata* (BPH) were included in this study.

Exclusion Criteria:

Patients below 50 years of age are excluded. Patients suffering from malignancy,

Systemic diseases like Uncontrolled Hypertension (HT) & Diabetes Mellitus (DM), Tuberculosis (TB), Paralysis, and Parkinsonism etc. were excluded from study.

Interventions:

Orally: *Kanchanar Guggulu* was administered in dose of 500 mg, three times (TID) with luke warm water, half an hour before breakfast.

Matra basti: *Dhanyaka Gokshura Ghrita* was administered in 60 ml once daily as *matra basti,* just before breakfast.

Procedure of *Matra Basti*:

In most of the patients *matra basti* was given after getting admitted in SHMW.

1. *Poorva Karma:*

- Patients advised to pass their natural urges prior to *matra basti*.
- All patients advised nil orally before the administration of *matra Basti*.
- Drugs required for *matra basti* like *DGG* were boiled before administration.
- Instruments like rubber catheter, 20cc syringe, gloves were kept ready.

2. *Pradhana Karma*:

- Patient was asked to lie in left lateral position on table.
- The *Dhanyaka Gokshura Ghrita* (DGG) is cooled to room temperature.
- Slowly and steadily 60ml DGG was administered through rectal route with plastic syringe and rubber catheter lubricated with *ghrita*.
- At the time of insertion of the *ghrita* patient was asked to inhale and exhale deeply and keep himself as relaxed as possible.

3. *Pashchata Karma*:

- After *matra basti* patients advised to lie down in left lateral position for 10 minutes.
- Patient was tapped on back and legs were kept in bending position.
- Dinner was allowed only after *matra basti*.
- Patient shifted to ward and hot water bag was provided for local *Swedana* (fomentation) at lower abdomen.
- All the patients asked to note the time of *pratyagamana kala* (time of retention) of *basti*.

Ethical clearance: Institutional ethics committee vide letter no.PGT/7-A/Ethics/2011-12/2087 Serial No. 38, dated 5/9/2010.

CTRI Registration: Trial Acknowledgement Number REF/2013/03/004818

Criteria for assessment:

Subjective Criteria: The symptoms of BPH were assessed by adopting International Prostate Symptom Score (IPSS). (7)

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Table 1: Subjective Criteria by Scoring Pattern:

Nocturia	
Up to2 times	0
>3 to 5 times	1
>5 to 7 times	2
> 7 times	3
Increased Frequency of Urination	
Up to 5 times	0
>5 to 7 times	1
>8 to 10 times	2
> 10 times	3
Urgency	
Absent	0
Occasionally	1
Often (in day time)	2
Always (in day & night)	3
Dribbling	
Absent	0
Occasionally	1
Often (in day time)	1
Always (in day & night)	**3**
Burning Micturation	
Absent	0
Occasionally	1
Often (in day time)	2
Always (in day & night)	3
Dysuria	
No difficulty in micturation	0
Difficulty in micturation>2 times	1
Difficulty in micturation>4 times	2
Difficulty in micturation always	3
Haematuria	
Absent	0
Microscopic presence of RBC up to 10	1
Smokey Urine (RBCs- 10 to 20)	2
Always reddish urine (RBC- plenty)	3
Incomplete Voiding	
Absent	0
Occasionally	1
Often (in day time)	2
Always (in day & night)	3
Weak Urine Stream (Stop & Start	
Absent	0
Occasionally	1
Often (in day time)	2
Always (in day & night)	3

Objective Criteria:

The assessment of prostate size and Post-void residual urine volume (PVRU) was done with the help of USG. The average urine flow rate (AUFR) was measured manually.

Table 2: Objective Criteria Score Pattern

Residual Urine Volume	
Nil (up to 30 cc)	0
> 30 to 60 cc	1
>60 to 90 cc	2
>90 to 120 cc	3
> 120 cc	4
Urine Flow Rate	
Normal or More (≥15 ml/Sec)	0
11 to < 15 ml/Sec	1
07 to <11 ml/Sec	2
03 to <07 ml/Sec	3
00 to < 03 ml/Sec	4
Prostrate size (volume)	
Up to Normal (14-26 cc)	0
> 26 to 36 cc	1
> 36 to 46 cc	2
> 46 to 56 cc	3
> 56 cc	4

Table 3: International prostate symptom score (IPSS)

IPSS	Not at all	Less than 1 time in 5	Less than half the time	About half the time	More than half the time	Almost always	Your score (BT)	Your score (AT)
Incomplete emptying Over the past month, how often have you had a sensation of not emptying your bladder completely after you finish urinating?	0	1	2	3	4	5		
Frequency Over the past month, how often have you had to urinate again less than two hours after you finished urinating?	0	1	2	3	4	5		
Intermittency Over the past month, how often have you found you stopped and started again several times when you urinated?	0	1	2	3	4	5		
Urgency Over the last month, how difficult have you found it to postpone urination?	0	1	2	3	4	5		
Weak stream Over the past month, how often have you had a weak urinary stream?	0	1	2	3	4	5		
Straining Over the past month, how often have you had to push or strain to begin urination?	0	1	2	3	4	5		
Nocturia Over the past month, many times did you most typically get up to urinate from the time you went to bed until the time you got up in the morning?	0	1	2	3	4	5		
Total IPSS score								

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

Total score:

0-7	Mildly Symptomatic
8-19	Moderately Symptomatic
20-35	Severely Symptomatic

Table 4: Criteria for Overall assessment:

Complete Cure	100% Relief in subjective, objective findings and IPSS parameters
Maximum Improvement	76 to <100% Relief in subjective, objective findings and IPSS parameters
Moderate Improvement	51 to 75% Relief in subjective, objective findings and IPSS parameters
Mild Improvement	26 to 50% Relief in subjective, objective findings and IPSS parameters
Unchanged	Up to 25 % Relief in subjective, objective findings and IPSS parameters

OBSERVATIONS AND RESULTS:

Table 5: Observation on demographic data (*n*=10)

Observation	No. of patients	%
Age (61-70)	7	70.00
Religion (Hindu)	10	100.00
Socio economic status (middle class)	4	40.00
Occupation (Retired)	6	60.00
Diet habit (*Samashana*)	5	50.00
Bowel habit (Irregular)	5	50.00
Chronicity (up to 1 year)	6	60.00
Prakriti (*Vata-kapha*)	4	40.00

Table 6: Observation on Symptoms: **(*n* =10)**

Symptoms	No. of patients	Percentage (%)
Nocturia	9	90.00
Increased Frequency	8	80.00
Dribbling	5	50.00
Heamaturia	0	00.00
Burning Micturation	9	90.00
Dysuria	8	80.00
Incomplete Voiding	7	70.00
Weak Stream	9	90.00
Urgency	6	60.00

Table 7: Observation on Local Findings **(*n*=10)**

Observations	No. of patients	%
Enlargement of lobes (Bilateral)	6	60.00
Shape (Oval & round)	5	50.00
Surface (Smooth)	9	90.00
Upper border of gland (Reached)	7	70.00
Median groove (Palpable)	7	70.00
Mobility (Fixed)	10	100.00
Rectal mucosa (Free)	10	100.00
Consistency (Soft)	6	60.00
Tenderness (Absent)	9	90.00
Size (Mild & moderate)	5	50.00

Table 8: Effect of therapy on IPSS

International Prostate Symptoms Score (AUA)	Mean Score		*n*	% Relief	SD	SE	t	p
	BT	AT						
Incomplete emptying	4.3	0.8	6	80.76	1.760	0.718	4.869	<0.001
Frequency	5.0	1.3	8	72.50	1.597	0.564	6.416	<0.001
Intermittency	4.2	0.7	7	83.33	1.133	0.428	8.333	<0.001
Urgency	4.5	1.5	6	66.66	1.897	0.774	3.872	<0.001
Weak stream	4.3	1.5	8	65.71	1.959	0.692	4.150	<0.001
Straining	3.7	1.0	7	76.92	1.951	0.737	3.872	<0.001
Nocturia	4.0	0.6	9	83.33	1.732	0.577	5.773	<0.001
Quality of life	5.1	1.4	9	71.73	1.224	0.408	8.981	<0.001

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Table 9: Effect of therapy on Objective parameters: (*n*=10)

Objective Parameters	Mean Score		% Relief	SD	SE	t	P
	BT	AT					
Prostate size & Volume	34.55	31.22	9.63	7.130	2.377	1.400	<0.05
Post-voidal Residual Urine Volume (PVRU)	49.89	13.89	72.16	56.60	18.86	1.908	<0.05
Average Urine Flow Rate	1.79	3.65	50.81	1.599	0.533	3.477	<0.01

Table10: Overall Effect of Therapy: (*n*=10)

Overall Effect	No. of Patients	%
Complete cured	0	00.00
Maximum Improvement	4	40.00
Moderate Improvement	4	40.00
Mild Improvement	2	20.00
Unchanged	0	00.00

Discussion:

The *mootraghata* is a broad term and it can be considered as a syndrome, because it covers most of the pathological entity of the urinary system into twelve types. (8) These types may be co-related with three major groups of modern parlance i.e. Neurogenic Bladder Distubances (NBD), Bladder Outflow Obstruction (BOO) & Lower Urinary Tract Symptoms (LUTS). Most of the patients in this study (46.66%) were from the age-group of 61-70 years as BPH is a disease related to aging. 60.00% of patient had chronicity of BPH up to 1 year which suggested that slow progressive nature of BPH. Maximum patients have the history of taking *madhura rasa (*86.67%*)*, *snigdha guna* (80.00%) & *laghu guna* (83.33%) dominant diet. These types of food increased *vata & kapha dosha* in the body which are the actual causative factor for *mootraghata*. Maximum i.e. 43.33 % of patients were belonging to *vata-kaphaja prakriti* which is important risk factor for susceptibility or development of *mootraghata*. (Table no.5)

In this study, the symptoms of BPH like weak stream, nocturia and increased frequency was observed more than 90% of patients as these are cardinal symptoms of BPH (Table no.6). The per rectal digital examination findings of BPH like smooth surface, upper border approachable, median grove palpable, soft consistency and free rectal mucosa all these signs were observed in most of the patients. These findings are suggestive that the selected patients had the benign enlargement of prostate and there was no possibility of malignant (Table no.7).

In this study all patients showed symptomatic relief and statistically showed highly significant result in most of symptoms (Table no.8). *Kanchanar Guggulu* which had *vatkapha shamak* properties due to its *pachana, bastishodhana, mootrala, grahee, pramathee* and *vata-kapha shamaka* pharmacological actions which played vital role in breaching *samprapti* of *mootraghata*. The recent studies on *Kanchanar Guggulu* also proved in treating urinary disorder due to its **kaempferol & quercitin flavonoids** that prevent estrogen receptor conditions like urinary incontinence and urogenital atrophy. (9) In *Kanchanar Guggulu* most

of the ingredients like (*Kanchanar*, *Haritaki*, *Bibhitaki*, and *Varun* etc.) contains **tannins** which elevates Thyroid Stimulating Hormone (TSH), Luteinizing Hormone (LH) and serum testosterone level. The increased testosterone level inhibits the further growth of prostate gland. The ingredient like *amalaki* is rich in **ascorbic acid** which plays important role as antioxidant.

In Ayurveda it is mentioned that *matra basti* is choice of treatment in controlling *vata dosha* in all types of *mootraghata*. (10) The effect of *matra basti* was seen on *apana vayu* and effect of drug was shown as *mootrala* and *vatakapha shamaka*. It was also having the effect of *basti shodhana* which might have lead to easy release of *mootra* from *basti. Matra basti* has also given *balya* effect to the *basti snayu* which helped to improve the tone of bladder and ultimately resulted in *samprapti vighatana* of *vata virddhi.* In *matra basti, gokshura* one of the ingredient has **beta-sitosterol**, *go ghirta* & *dhanyaka* both contains **linoleic acid and oleic acid**. Beta-sitosterol is shown effective in symptoms like nocturia while linoleic acid and oleic acid inhibit 5-α reductase activity. (11,12) The inhibition of 5-α reductase controls the Dihydrotestosterone (DHT). So decrease/ controlling in DHT ultimately control the further growth of prostate gland and relieve symptoms of BPH.

In objective parameters the size and volume of prostate as per USG finding showed mild decrease and statistical significant result were seen. In case of post-void residual urine volume in individual patients before and after, was markedly reduced by 72.16% and showed significant result statistically (Table no.9).In average urine flow rate, highly significant result observed might be the obstruction of urine flow by improving the function of *apana vayu*. *Kanchanar Guggulu* contains ascorbic acid which helps in relaxing the smooth muscle of bladder neck and prostate gland to relieve in pressure and improve the urine flow. The overall result showed that 40% patients were shown maximum improvement, 40% cases showed moderate improvement and 20 patients showed mild improvement in signs and symptoms. The complete cure was not observed in any patients as there is a structural change in prostate gland in old age. So it can be said that study showed positive effect of combined therapy in the management of BPH (Table no.10).

Conclusion:

Finally study was concluded that *Kanchanar Guggulu* orally (KG) & *Dhanyaka Gokshura Ghrita Matra Basti* (DGG MB) is safe and effective in symptomatic management of *mootraghata* (BPH). It was also concluded that further growth of the prostate grand can be controlled with this therapy. As this study is conducted on less number of patients and trans- rectal sonography (TRS) has been not performed. So it needs to be studied in more number of patients which assessed with TUR for concrete conclusion. There was no any adverse effect throughout the study.

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