



Clinical Research

Efficacy of *Kanchanara Guggulu* and *Matra Basti* of *Dhanyaka Gokshura Ghrita* in *Mootraghata* (benign prostatic hyperplasia)

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Abstract

Background: Benign prostatic hyperplasia (BPH), a senile disorder affects male of and above 40 years characterized by retention, incomplete voiding, dribbling, hesitancy, and incontinence of urine. This condition is comparable with *Mootraghata* in Ayurveda. Surgical intervention has been accepted as standard management, but has acute cystitis, acute epididymitis, erectile dysfunction, retrograde ejaculation, etc. as complications. Conservative treatment with modern medicine is also associated with side effects. Hence, to avoid such complications and improve the quality of life in senile age, conservative management with Ayurveda is attempted. **Aim:** To evaluate clinical efficacy of *Kanchanara Guggulu* and *Dhanyaka Gokshura Ghrita Matra Basti* in *Mootraghata*. **Materials and Methods:** Total 30 patients having signs and symptoms of BPH were selected from OPD and IPD of Shalya Tantra and enrolled equally into three groups ($n = 10$). Patients of Group A were administered with *Kanchanara Guggulu* (500 mg, 3 times a day orally), Group B were with *Dhanyaka Gokshura Ghrita Matra Basti*, while patients of Group C were administered both the drugs for 21 days. International prostate symptom score (IPSS) was used to assess the efficacy. paired and unpaired “t” test, Chi-square test were applied for significance. **Results:** In IPSS, Group B had shown the better results (84.27%) than the Group A (72.68%) and Group C (82.10%). In all objective parameters, Group C had shown better effect (23.60%) than Group A (15.70%) and Group B (18.24%). Symptomatic relief was better in Group B than Groups A and C. Comparison between three groups on objective parameters was better in Group C than in Group A and B. **Conclusion:** *Kanchanara Guggulu* orally and *Dhanyaka Gokshura Ghrita Matra Basti* is effective conservative management for symptomatic relief in BPH of senile age.

Key words: Benign prostatic hyperplasia, *Dhanyaka Gokshura Ghrita*, *Kanchanara Guggulu*, *Matra Basti*, *Mootraghata*

Introduction

Benign prostatic hyperplasia (BPH) is a nonmalignant enlargement of the prostate gland caused by excessive growth of prostatic tissue and is the most common benign neoplasm^[1] of senile men which affects above the age of 40 years. In modern medicine, the management of BPH is either through a surgical approach, e.g., open prostatectomy, trans-urethral resection of the prostate, cryotherapy, etc., or by conservative treatment using drugs, e.g., hormonal

therapy, chemotherapy, etc.^[2] In old age, surgery is associated with many complications such as postoperative morbidity, impotence, retrograde ejaculation.^[3] In case of hormonal therapy, there are complications like loss of libido, impotence, gynecomastia and such interventions are expensive too.

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This condition is comparable to *Mootraghata* in Ayurveda, which is manifested because of deranged *Apana Vayu*. *Basti* (*Matra Basti*) is an authentic treatment for vitiated *Vayu*,^[4] where no strict restrictions are required. In *Mootraghata*, *Mootravaha Srotodushti* and vitiation of *Vata* and *Kapha* are involved. So, *Vata-Kapha Shamaka* (pacifying) drugs along with *Matra Basti* may be helpful in reducing the size of the prostate and enhancing the tonicity of urinary bladder. Considering these properties, *Kanchanara Guggulu*^[5] and *Dhanyaka Gokshura Ghrita*^[6] [Table 1] were selected to evaluate the clinical efficacy in *Mootraghata* (BPH).

Materials and Methods

Total 30 patients having signs and symptoms of *Mootraghata* (BPH) were selected from Outpatient Department and Inpatient Department of Shalya Tantra, IPGT, and RA, Gujarat Ayurved University, Jamnagar. Ethical clearance was obtained from Institutional Ethics Committee (No. PGT/7-A/Ethics/2011-12/2087/38, dt. 5/9/2010) before commencement of the study. Informed consent was taken from each registered patient before starting the treatment. The trial is also registered to Clinical Trial Registry of India (CTRI/2015/08/006095) retrospectively.

Inclusion criteria

Male patients of age above 50 years having signs and symptoms of *Mootraghata* (BPH) such as *Bahumutrata* (increased frequency of micturition), *Manda Mootradhara* (weak stream of urine), *Mootravarodha* (acute/chronic urine retention), *Mootradaha* (painful micturition), *Vrita Granthi* (oval shaped enlarged prostate), *Ashtilavat Granthi* (soft consistency), *Alpa*

Granthi (mild to moderate enlargement in size of prostate), etc., were included in the study.

Exclusion criteria

Patients below age of 50 years, suffering with malignancy, congenital abnormalities of urogenital tract or any other pelvic pathologies, uncontrolled hypertension, diabetes mellitus, tuberculosis, hemiplegia, parkinsonism, etc. were excluded from the study.

Drug and posology

- Patients of Group A received 500 mg of *Kanchanara Guggulu* thrice a day, orally, with lukewarm water, half an hour before food.
- Patients of Group B received 60 ml *Dhanyaka Gokshura Ghrita* once a day as *Matra Basti*, just before breakfast
- Patients of Group C received both the drugs in the same dose as above.

The drugs were administered for 21 days in all groups. Both the trial drugs were prepared and procured from Pharmacy, Gujarat Ayurved University, Jamnagar.

Criteria for assessment

Subjective criteria

The symptoms of BPH were assessed by adopting International Prostate Symptom Score (IPSS).^[7]

Objective criteria

Assessment of prostate size, Post Voidal Residual Urine (PVRU) volume, Average Urine Flow Rate (AUFR).

Criteria for overall assessment

- Complete remission: 100% relief in subjective, objective

Table 1: Ingredients of test drugs

Sanskrit name	Latin name	Part used	Quantity	Used in Kalpana as
<i>Dhanyaka Gokshura Ghrita</i>				
Cow's Ghee	-	-	30 kg	<i>Sneha</i>
<i>Dhanyaka</i>	<i>Coriandrum sativum</i> L.	Fruit	3.75 kg	<i>Kalka Dravya</i>
<i>Gokshura</i>	<i>Tribulus terrestris</i> L.	Fruit	3.75 kg	<i>Kalka Dravya</i>
<i>Dhanyaka Yavakuta</i>	<i>Coriandrum sativum</i> L.	Fruit	30 kg	<i>Kwatha Dravya</i>
<i>Gokshura Yavakuta</i>	<i>Tribulus terrestris</i> L.	Whole plant	30 kg	<i>Kwatha Dravya</i>
Water	-	-	480 l	
<i>Kanchanara Guggulu</i>				
<i>Kanchanara</i>	<i>Bauhinia variegata</i> (L.) Benth.	Bark	200 g	<i>Churna</i>
<i>Triphala</i>	<i>Embelica officinalis</i> Gaertn.	Pericarp	40 g	<i>Churna</i>
	<i>Terminalia chebula</i> Retz.	Pericarp	40 g	<i>Churna</i>
	<i>Terminalia bellerica</i> Roxb.	Pericarp	40 g	<i>Churna</i>
<i>Trikatu</i>	<i>Zingiber officinalis</i> Roscoe.	Rhizome	20 g	<i>Churna</i>
	<i>Piper nigrum</i> L.	Fruit	20 g	<i>Churna</i>
	<i>Piper longum</i> L.	Fruit	20 g	<i>Churna</i>
<i>Varuna</i>	<i>Crataeva nurvala</i> Buch. Ham.	Bark	20 g	<i>Churna</i>
<i>Ela</i>	<i>Elettaria cardamomum</i> (L.) Maton.	Seed	5 g	<i>Churna</i>
<i>Twak</i>	<i>Cinnamomum zeylanicum</i> Blume.	Bark	5 g	<i>Churna</i>
<i>Tejpatra</i>	<i>Cinnamomum tamala</i> Nees. and Eberm.	Leaf	5 g	<i>Churna</i>
<i>Guggulu</i>	<i>Commiphora wightii</i> (Arn.) Bhandari	Oleo-resin	415 g	

- findings and IPSS parameters
- Marked improvement: 76–99% relief in subjective, objective findings and IPSS parameters
- Moderate improvement: 51–75% relief in subjective, objective findings and IPSS parameters
- Mild improvement: 26–50% relief in subjective, objective findings and IPSS parameters
- Unchanged: Up to 25% relief in subjective, objective findings and IPSS parameters.

Statistical analysis

The statistical tests like paired and unpaired “*t*” test, Chi-square test were applied for significance.

Observations

Among 30 patients, 27 completed the treatment and follow-up (9 in each group). Maximum patients belonged to 61–70 years of age group (46.66%), retired from service (60%), Hindu religion (100%), economically middle class (90%), married (96.67%), educated (83.33%), normal built (80%), *Madhyama Koshta* (63.33%), *Samagni* (40%), and *Vatakaphaja Prakriti* (43.33%). The symptoms of BPH like, nocturia (93.33%), weak stream (93.33%), increased frequency (90.00%), incomplete voiding (73.33%), dysuria (73.33%), burning micturition (70.00%), urgency (56.67%), dribbling (46.67%) of patients were noted. On per rectal examination; maximum patients (46.67%) were noted having enlargement of the right lobe. The shape of the prostate was oval in 53.33% of cases and smooth in surface 96.67% of cases while free rectal mucosa was noted in 100% of cases. The median groove was palpable in 86.67% of cases, and the upper border was approachable in 86.67% of cases. Prostate consistency was soft in 73.33% of cases, and mild enlargement was found in 80.00% of patients.

Results

Effect of therapy on subjective parameters

Group A depicted highly significant ($P < 0.001$) results in IPSS like incomplete voiding, frequency, intermittency, weak stream, straining, quality of life and significant effect ($P < 0.01$) was seen in nocturia and urgency [Table 2]. In Group B (*Matra Basti*) highly significant ($P < 0.001$) effect on IPSS as well as also improved the quality of life by 80.85% relief [Table 3], while Group C exhibited highly significant ($P < 0.001$) results in all the mentioned symptoms of IPSS including 71.73% improvement in the quality of life [Table 4].

Effect of therapy on objective parameters

Kanchanara Guggulu rendered significant ($P < 0.01$) results in AUFR as well as PVRU ($P < 0.05$) and insignificant ($P > 0.05$) changes in prostate size in Group A [Table 5]. *Dhanyaka Gokshura Ghrita Matra Basti* in Group B rendered statistically highly significant ($P < 0.001$) effect on improving AUFR and significant ($P < 0.05$) effect on PVRU while insignificant ($P > 0.05$) changes were observed in the size of enlarged prostate gland [Table 6]. *Kanchanara Guggulu* orally and *Dhanyaka Gokshura Ghrita* as *Matra Basti* in Group C rendered statistically highly significant ($P < 0.001$) effect on improving AUFR and significant ($P < 0.05$) effect on PVRU. In the case of a reduction in the size of prostate gland insignificant ($P > 0.05$) changes were observed [Table 7].

Comparative effective of therapy

In IPSS, Group B had shown better results than Group A and C. In all objective parameters, Group C had shown better effect than other groups [Table 8].

The observations of the contingency table were not significantly related as *P* values in comparative groups such as A and B ($P > 0.05$), A and C ($P > 0.05$) and B and C ($P > 0.05$), respectively. This suggested that change occurred with the treatment was not enough to exclude the possibility that the difference was due to chance. Hence, all these three groups have given parallel effect on symptoms/IPSS score of disease according to statistical analysis [Table 9]. The comparative effect on objective parameters was calculated by using unpaired “*t*” test. Statistically insignificant difference was found between all the three groups in all parameters ($P > 0.05$). Hence, it can be said that there was no difference in all three groups in relieving the signs (objective) or are equally effective [Tables 10-12].

Overall effect of therapy

In overall effect of therapy, complete cure was not observed in any patients as the disease is progressive and age-related degenerative geriatric disease. The maximum improvement was seen in 33.34%, 55.56% and 33.34% of patients in Group A, Group B and Group C, respectively. Moderate improvement was seen in 44.44% of patients in all three groups. The mild improvement was seen in 11.11% and 22.22% in Group A and Group C, respectively [Figure 1].

Discussion

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 12 types.^[8] These types may be co-related with three major groups of modern parlance that is, neurogenic bladder disturbances, bladder outflow obstruction and lower urinary tract symptoms.

Most of the patients in this study (46.66%) were from the age group of 61–70 years, which is to be expected since BPH is a disease related to aging. 60.00% of patients had chronicity of BPH up to 1 year, which suggested slow progressive nature of BPH. Maximum patients have the habit of consuming diet of *Madhura Rasa* (sweet taste) (86.67%), *Snigdha* (unctuous) *Guna* (80.00%) and *Laghu* (light) *Guna* (83.33%) predominance. These types of food increase *Kapha Dosha* in the body, which is the major causative factor for *Mootraghata*. Maximum 43.33% patients were belonging to *Vata-Kaphaja Prakriti*, which is important risk factor for this *Prakriti* individual for the development of *Mootraghata*.

In this study, the symptoms of BPH like weak stream, nocturia, and increased frequency was observed in more than 90% of patients that are cardinal symptoms of BPH. Per rectal digital examination findings of BPH having the symptoms that is a smooth surface, upper border approachable, median groove palpable, soft consistency, and free rectal mucosa. These findings suggest that the selected patients had benign enlargement of the prostate and there was no possibility of malignant changes.

Table 2: Effect of therapy on International Prostate Symptom Score in Group A

IPSS (AUA)	n	Mean score		Percentage of relief	SD	SE	t	P
		BT	AT					
Incomplete emptying	7	4.4	1.1	74.19	1.704	0.644	5.100	<0.001
Frequency	9	4.5	1.8	58.53	1.936	0.645	4.131	<0.001
Intermittency	5	4.4	1.0	77.27	1.516	0.678	5.013	<0.001
Urgency	6	4.0	1.0	75.00	2.000	0.816	3.674	<0.01
Weak stream	7	5.0	0.8	82.85	1.864	0.704	5.878	<0.001
Straining	6	4.6	0.8	82.14	0.983	0.401	9.550	<0.001
Nocturia	7	4.2	2.2	46.66	1.527	0.577	3.464	<0.01
Quality of life	9	5.3	2.2	45.83	1.943	0.647	3.772	<0.001

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUA: American Urological Association, IPSS: International Prostate Symptom Score

Table 3: Effect of therapy on International Prostate Symptom Score in Group B

IPSS (AUA)	n	Mean score		Percentage of relief	SD	SE	t	P
		BT	AT					
Incomplete emptying	6	5.0	0.3	93.33	0.516	0.210	22.135	<0.001
Frequency	7	4.0	1.5	60.71	1.511	0.571	4.250	<0.001
Intermittency	8	4.1	0.7	81.81	1.995	0.705	4.783	<0.001
Urgency	6	3.6	0.1	95.45	1.974	0.806	4.341	<0.001
Weak stream	9	4.6	1.4	69.04	2.223	0.741	4.347	<0.001
Straining	6	5.0	0.6	86.66	0.816	0.333	13.00	<0.001
Nocturia	8	4.1	1.0	75.75	1.642	0.580	5.382	<0.001
Quality of life	9	5.2	1.0	80.85	1.092	0.364	11.58	<0.001

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUA: American Urological Association, IPSS: International Prostate Symptom Score

Table 4: Effect of therapy on International Prostate Symptom Score in Group C

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

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUA: American Urological Association, IPSS: International Prostate Symptom Score

Table 5: Effect of therapy on objective parameters in Group A (n=9)

Objective parameters	Mean score		Percentage of relief	SD	SE	t	P
	BT	AT					
Prostate size and volume	33.93	30.38	10.48	7.178	2.393	1.486	>0.05
PVRU volume	36.81	20.22	45.06	31.09	10.36	1.600	<0.05
AUFR	0.81	1.94	58.74	1.040	0.340	3.259	<0.01

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

Table 6: Effect of therapy on objective parameters in Group B (n=9)

Objective parameters	Mean score		Percentage of relief	SD	SE	t	P
	BT	AT					
Prostate size and volume	26.22	25.22	3.81	2.000	0.667	1.500	>0.05
PVRU volume	19.11	10.0	47.67	16.003	5.334	1.708	<0.05
AUFR	0.99	2.73	63.72	0.673	0.224	7.749	<0.001

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

Table 7: Effect of therapy on objective parameters in Group C (n=9)

Objective parameters	Mean score		Percentage of relief	SD	SE	t	P
	BT	AT					
Prostate size and volume	34.55	31.22	9.63	7.130	2.377	1.400	>0.05
PVRU volume	49.89	13.89	72.16	56.60	18.86	1.908	<0.05
AUFR	1.79	3.65	50.81	1.599	0.533	3.477	<0.01

SD: Standard deviation, SE: Standard error, BT: Before treatment, AT: After treatment, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

Table 8: Comparative mean effect of therapy in percentage

Groups	Effect of therapy in percentage	
	Effect on IPSS	Effect on objective parameter
A (n=9)	64.40	15.70
B (n=9)	80.60	18.24
C (n=9)	75.05	23.60

IPSS: International Prostate Symptom Score

Table 9: Comparative effect on subjective parameters between all the three groups

Group	N.S.I.	S.I.	Row total	df	χ^2	P
A	2	7	9	1	0.562	>0.05
B	0	9	9			
Column total	02	16	18			
A	2	7	9	1	0.400	>0.05
C	1	8	9			
Column total	03	15	18			
A	2	7	9	1	0.400	>0.05
C	1	8	9			
Column total	03	15	18			

N.S.I.: Non significant improvement, S.I.: Significant improvement

Table 10: Comparative effect on objective parameters between Group A and B

Objective parameters	Mean difference		SD	SE	t	P
	Group A	Group B				
Prostate size	3.56	0.44	5.163	2.434	1.278	>0.05
PVRU volume	16.59	9.11	24.730	11.658	0.641	>0.05
AUFR	-1.04	-1.59	1.004	0.473	1.162	>0.05

SD: Standard deviation, SE: Standard error, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

Table 11: Comparative effect on objective parameters between Group A and C

Objective parameters	Mean difference		SD	SE	t	P
	Group A	Group C				
Prostate size	3.56	3.33	7.154	3.372	0.068	>0.05
PVRU volume	16.59	32.67	46.455	21.899	-0.734	>0.05
AUFR	-1.04	-1.67	1.445	0.681	0.920	>0.05

SD: Standard deviation, SE: Standard error, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

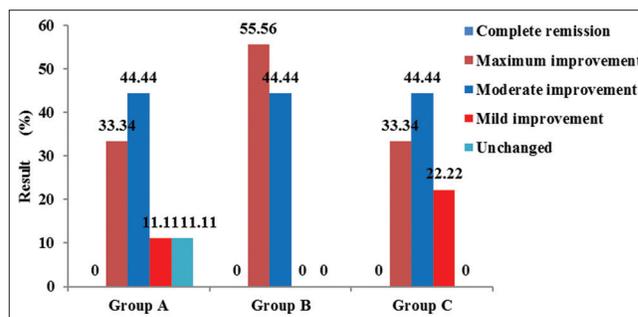


Figure 1: Overall effect of therapy

In Group A, symptomatic relief in dribbling, dysuria, incomplete voiding, weak stream and increased frequency of micturition was found statistically highly significant [Table 2]. In this group, patients were administered *Kanchanara Guggulu* which had *Vata-Kapha Shamaka* (pacifying *Vata-Kapha*) properties. Ingredients of *Kanchanara Guggulu* contains kaempferol and quercetin flavonoids which prevents estrogen receptor conditions such as urinary incontinence and urogenital atrophy.^[9] In objective parameters, a significant result was observed in AUFR and PVRU because of *Kanchanara Guggulu* contents that are, *Triphala*, *Trikatu* which have ascorbic acid (Vitamin C) which helps to relax the smooth muscle of the prostate and bladder neck to relieve pressure and improve urine flow.^[10] Insignificant result was observed in prostate size, which might be due to the short duration of therapy.

In Group B, maximum patients have shown symptomatic relief in signs and symptoms of BPH, which are statistically significant ($P < 0.001$) [Table 3]. In Ayurveda, it is mentioned that *Basti* is the choice of treatment in controlling *Vata Dosha*.^[11] Thus *Matra Basti* helps in improving functions of *Apana Vayu* and relieves the symptoms of *Mootraghata*. One of the ingredient *Dhanyaka* (*Coriandrum sativum* L.) contains choriandrol, which is diuretic. *Gokshura* (*Tribulus terrestris* L.) another component contains diosgenin, which has anti-proliferative activity helps to relieve symptoms of BPH like, nocturia, increased the frequency and prostate enlargement.^[12] Increased average AUFR is positive finding in cases of BPH and it increased due to *Dhanyaka Gokshura Ghrita* which has *Mootrala* (diuretic) and *Vata-Kapha Shamaka* properties.

Patients of Group C showed highly significant, symptomatic relief in signs and symptoms of BPH [Table 4]. *Amalaki* rich in ascorbic acid plays important role as antioxidant. *Gokshura*, the component of *Matra Basti* has beta-sitosterol, cow ghee, and *Dhanyaka* contains linoleic acid and oleic acid. Beta-sitosterol is effective in symptoms like nocturia while linoleic acid and oleic acid inhibit 5- α reductase activity.^[13,14] The inhibition

Table 12: Comparative effect on objective parameters between Group B and C

Objective parameters	Mean difference		SD	SE	t	P
	Group A	Group B				
Prostate size	0.44	3.33	5.129	2.418	-1.193	>0.05
PVRU volume	9.11	32.67	42.457	20.014	-1.177	>0.05
AUFR	-1.59	-1.67	1.365	0.644	0.119	>0.05

SD: Standard deviation, SE: Standard error, AUFR: Average urine flow rate, PVRU: Postvoidal residual urine

of 5- α reductase controls the dihydrotestosterone (DHT). So, decrease or controlling in DHT ultimately control further growth of prostate gland and relieve symptoms of BPH. Highly significant results were observed in AUFR possibly by improving the functions of *Apana Vayu*. In the case of PVRU, in individual patients before and after, was markedly reduced by 72.16% and showed statistically significant result [Tables 5-7].

Conclusion

The study concluded that individual oral drug *Kanchanara Guggulu* and *Matra Basti* with *Dhanyaka Gokshura Ghrita* is effective in cases of BPH for symptomatic relief. The combined therapy showed more effective conservative treatment than the single therapy. This conservative treatment is said to be safe and effective alternative management in cases of *Mootraghata* (BPH) in senile age and improve the quality of life of patients.

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Conflicts of interest

There are no conflicts of interest.

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हिन्दी सारांश

मूत्रघात के रोगियों में कांचनार गुग्गुलु और धान्यक गोक्षुर घृत की मात्राबस्ति का चिकित्सकीय अध्ययन

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मूत्राघात वृद्धावस्था जन्य रोग है, जो चालीस साल के बाद होता है। जिसमें बूंद बूंद पेशाब गिरना, बार बार पेशाब जाना, पेशाब रुक रुक के आना, पेशाब की पतली धार आना, आदि लक्षण मिलते हैं। शस्त्रक्रिया एक संपूर्ण चिकित्सा पद्धति है, किन्तु उससे अन्य उपद्रव जैसे कि तीव्र मूत्राशय शोथ, लिंग का टट्टार न रहना, वीर्य ऊपर की तरफ स्खलन होना आदि उत्पन्न होते हैं। आधुनिक चिकित्सा पद्धति में औषधि चिकित्सा भी उपद्रव से मुक्त नहीं है। इसलिये इस उम्र में उपद्रव रहित अन्य चिकित्सा पद्धति कि जरूरत पड़ती है। इसलिये इस अध्ययन में कांचनार गुग्गुलु और धान्यक गोक्षुर घृत की मात्राबस्ति का प्रयोग किया गया है। इस अध्ययन में मूत्राघात के लक्षण मिलनेवाले रोगियों को शल्यतंत्र के अंतरंग और बहिरंग विभाग से पंजीकृत करके तीन वर्गों में समान रूप से विभाजित किया गया है। वर्ग-अ में कांचनार गुग्गुलु वर्ग-ब में धान्यक गोक्षुर घृत की मात्राबस्ति और वर्ग-क में संयुक्त चिकित्सा दी गई है। सभी वर्गों में इक्कीस दिनों के बाद मिले परिणामों को सांख्यिकी दृष्टि से स्वीकृत को गुणांको के आधार पर परिणाम निकाला गया। तीनों वर्गों में से वर्ग-ब के रोगियों को लक्षणों में और वर्ग-क के रोगियों चिह्नों में ज्यादा लाभ मिला है। अतः इस अध्ययन से यह मूल्यांकन किया गया है कि कांचनार गुग्गुलु और धान्यक गोक्षुर घृत की मात्राबस्ति मूत्राघात के लक्षणों में लाभकारक है।