



Review Article

EFFICACY OF AYURVEDA FORMULATIONS AND BASTI CHIKITSA ON MUTRAGHATA W.S.R. TO BENIGN PROSTATIC HYPERPLASIA: A REVIEW ON RESEARCHES CONDUCTED AT GUJARAT AYURVED UNIVERSITY, JAMNAGAR

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ABSTRACT

Benign Prostatic Hyperplasia (BPH) is major geriatric problem of obstructive uropathic disorders described in *Ayurveda* classic as one type of *Mutraghata* (urinary disorders). Twelve types of *Mutraghata* reflect the symptoms of retention, incomplete voiding, dribbling, hesitancy, incontinence of urine, etc. These are basically presented the features related to the Lower Urinary Tract Symptoms (LUTS) and can be co-related with Benign Prostatic Hyperplasia (BPH) in modern parlance. BPH is a non-malignant enlargement of the prostate gland, caused by the excessive growth of prostatic nodules. The overall incidence rate of BPH is about 15 per 1000 men per year. The conservative treatments have been mentioned to relieve the obstructive uropathy by reducing prostate size and enhancing the tone of urinary bladder musculature in contemporary medical science. Similarly in *Ayurveda* also, various researches are going on to find out a suitable treatment option to manage *Mutraghata*. In the *Sushruta Samhita* the choice of treatment for *Mutraghata* is *Uttara Basti* as *Shodhan Chikitsa*. In this review, in most of the studies *Matra Basti* was given in one group of patients and showed the encouraging results. This review article is attributed to the researches on *Mutraghata* carried out at I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar, Gujarat.

KEYWORDS: Ayurveda, Benign prostatic hyperplasia, Uttara Basti, Matra Basti, Mutraghata.

INTRODUCTION

Sushruta Samhita, one among the *Brihatrayee* (Three literature of *Ayurveda*), describes twelve types of *Mutraghata*. The word '*Mutraghata*' comprises of two different words i.e. '*Mutra*' and '*Aghata*', which stand for low urine output due to obstruction in the passage of urine. The sign and symptoms of *Mutraghata* is closely resemble with the Benign Prostatic Hyperplasia (BPH).^[1] According to *Ayurveda*, *Mutraghata* is manifested due to deranged function of *Apana Vayu* along with the vitiation of *Kapha* and *Pitta Dosha*. The vitiated *Doshas* are produced in the body due to improper of *Ahara Vihara* (diet and activity or daily regimen), *Ritu Parivartan* (seasonal changes) and *Vaya* (advancement of age). Ultimately, they travel through *Sukshma Srotasa* and finally *Doshas* are settle down at the *Kha Vaigunya* (diseased area) i.e. *Basti Pradesha* (urinary bladder) and developed the clinical entity *Mutraghata*. The symptoms like retention of urine, incomplete

voiding, dribbling, hesitancy etc. are found in *Mutraghata*.

Benign Prostatic Hyperplasia (BPH) is most common lower urinary tract disorder in modern medicine. It is a non-malignant enlargement of the prostate gland caused by either excessive hyperplasia of prostatic tissue. It is an old age related disorder found in men and responsible for significant morbidity in older age groups which hamper the quality of life. The growth / neoplastic changes in the prostate gland occurs due to the changes in the level of hormonal imbalance especially androgens and oestrogens.^[2] Incidence rates increase from 3 cases per 1000 man per year at the age 45-49 years, 38 cases per 1000 men per year by the age of 75-79 years which shows the vulnerability of the disease at terminal age. The treatment options in modern medicine is either by conservative treatment using drugs

(hormonal therapy, chemotherapy etc.) or surgical intervention like open prostatectomy, Transurethral resection of Prostate (TURP), cryotherapy etc. In case of hormonal therapy there are complications like loss of libido, impotence and gynecomastia. Despite of the extensive researches till date there is no complete therapy to manage Benign Prostatic Hyperplasia (BPH) in modern medicine. [3]

Various treatment options like *Shodhan Chikitsa* and *Shaman Chikitsa* in form of *Kashaya* (decoction), *Kalka* (paste), *Ghrta* (medicated ghee) and *Kshara* (caustics) are mentioned under *Mutraghata*. Keeping to the consideration of line of management, the treatment methods which are adopted for *Mutrakricchahara* like *Abhyanga*, *Niruha Basti*, *Snehapana*, *Uttara Basti*, *Seka*, *Pradeha*, *Virechana* etc are advised for all varieties of *Mutraghata*. These procedures are being selected as per the predominance of individual *Doshas*. In *Sushruta Samhita Nidigdhikaadi swaras*, *Amalaka swaras*, *Elayukta dhaatri swaras*, *Mustadi kalka*, *Abhayadi kalka*, *Balaadi kalka*, *Ervaru (Cucumber) kalka*, *Mutradosahara Ksheerapaaka*, *Mutrarakta yonidoshahara ghrta*, *Baladi ghrta*, *Mahabala ghrta*, *Patolyadi kshara* are mentioned. [4] The drugs like *Shatavaryadi kwatha*, *Vyoshadi churna*, *Pashanabhedadi churna*, *Punarnavadi mishraka sneha*, *Shwadanstra ghrta (Gokshuradi ghrta)*, *Punarnavadi panyoga*, *Saptachchhadadi yavagu* are found in *Charak Samhita*. [5] In *Asthang Sangraha*, the description of *Kantakaari swaras*, *Duralabha swaras*, *Trapushadi kalka*, *Simhyadi kalka*, *Sasaindhava triphala kalka*, *Haritakyadi kwatha*, *Shringastaka Trinapanchamuladi kwatha*, *Pashanabhedadi kwatha*, *Dashamooladi ghrta*, *Tilvaka ghrta*, *Patala Kshara*, *Gokshura kantakari Siddha yavagu* are found. [6] The specific formulations such as *Dhanyaka-gokshura Ghrta*, *Dhanyaka-gokshura kwatha*, *Kulatha sidhhha ghrta*, *Vidari ghrta* are cited in *Bhavprakash*. [7] In the context of *Mutraghata*, *Sharangadhara* has given the descriptions of *Chandraprabha vati*, *Gokshuraadi Guggulu* and *Changeri ghrta*. [8]

In this article total 10 research studies have been reviewed out of which 04 *Matra Basti*, 04 with Oral Medication. Studies on *Matra Basti* and 02 studies on *Uttara Basti* which were carried out at IPGT & RA Jamnagar to find the effective modalities or formulations in the management of *Mutraghata*.

MATERIAL AND METHODS

Materials: Research works done on the management of *Mutraghata* were collected manually from the library of department of *Shalya Tantra*, and data available in *Ayurveda* database, on all PG/Ph.D. theses carried out at I.P.G.T. & R.A. Jamnagar. [9]

Methods: After review of research work done on *Mutraghata* it was observed that most of the scholars have selected *Matra Basti* along with oral different formulations as mentioned in the classics. So the methodology adopted for *Matra Basti* and *Uttara Basti* is given as follow.

BASTI PROCEDURE

Poorva Karma (Preoperative measures)

Patients were advised to pass the natural urges particularly stool and urine before procedure. All patients were advised for nil oral before the administration of *Basti*.

Required *Basti* materials like Sterilised rubber catheter, 50cc syringe, gloves and gauze pieces etc. were kept ready before administration of *Uttara Basti*.

Pradhana Karma (Operative measures)

Patient was kept in left lateral position for *Matra Basti* and supine position for *Uttara Basti*. The selected oil / *Ghrta* was warmed up to room temperature. A lubricated rubber catheter was inserted in to the rectum and approximately 60 ml of selected *Ghrta* / *Tail* was slowly administered with help of a plastic syringe. In case of *Uttara Basti* the genital area was cleaned with betadine followed by 30-50ml *Tail* was administered with help of a sterilised catheter. Patient was advised to inhale and exhale deeply and keep himself as relaxed as possible during administration. *Basti* was given for continuous 21 days once a daily before breakfast.

Pashchata Karma (Post-Operative measures)

After *Basti* patient was advised to lie down in left lateral position for 10 minutes. Patient shifted to ward and hot water bag was provided for local *Svedana* at lower abdomen. Patient was advised to retain the *Basti* material for maximum time as possible. The *Pratyagamana kala* (retention time) of *Basti* was noted daily. Light diet was allowed after one hour.

RESULTS

Clinical evaluation of *Mustadi Kalpa* in the management of *Mutraghata*.^[10] The Clinical study was planned with aim to assess the efficacy of *Mustadi Kalpa* in the senile enlargement of prostate. Total 14 patients of Benign Prostatic Hyperplasia were selected and divided into 2 groups. In first group the patients having history of benign enlargement of prostate with chronic retention of urine without incontinence and with incontinence in second group. *Mustadi Kalpa* (*Musta* (*Cyperus rotundus*), *Deodaru* (*Cedrus deodara*), *Haritaki* (*Terminalia chebula*) and *Yastimadhu* (*Glycyrrhiza glabra*) in powder form orally 10 gm once in the morning was administered for 3 weeks with lukewarm water in *Apana Kala* (before breakfast). Diurnal frequency showed highly significantly ($p < .001$) relief and nocturnal frequency showed significant ($p < .01$) relief in both groups. In weak stream highly significantly ($p < .001$) improvement in first group and significant ($p < .01$) improvement was noticed in second group. In hesitancy and intermittency significant ($p < .05$) improvement was observed in first group where as significant ($p < .01$) improvement was noticed in second group. In incontinence highly significant ($p < .001$) improvement was noticed in second group. In the residual urine volume a significant ($p < .01$) improvement was observed in first group and highly significant ($p < .001$) improvement in patients of second group. Finally study concluded that *Mustadi Kalpa* is effective treatment for the symptomatic management of BPH.

Role of *Devdarvyadi* Compound and *Basti* in the management of *Mutraghata*.^[11] The aim of study was to evaluated the role of *Devdarvyadi* compound orally, *Niruha Basti* of *Devdarvyadi Kwatha* and *Eranda Taila Anuvasan Basti* in the management *Mutraghata* (BPH). Total 24 patients of BPH were selected and equally divided in three groups. In group-A *Devdarvyadi* compound (*Devadaru*, *Musta*, *Haritaki*, *Vastimadhu*, *Punarnava*, *Pashanbheda*, *Gokshura*, *Svetachandana*, *Kamala*, *Useera*) orally in powder form 10gm/day with lukewarm water in *Apana Kala* (before food) for one month. *Niruha Basti* (80gm for *Kwatha*, 40g for *Kalka* of coarse powder of *Devdarvyadi* compound and 120ml *Eranda Tail*, *Saindhava lavana* 5gm) and *Anuvasan Basti* of *Devdarvyadi Kwatha* and *Eranda Taila* (100ml) was administrated alternate day for the duration of 8 days. In group

B only *Devadaryadi* compound in powder form orally was given. In Group C only *Niruha* and *Anuvasan Basti* therapy was given. Nocturia was relieved by 83.11% in group A, by 79.20 % in group C and by 27.75 % in group B. Dysuria was relieved by 81.00 % in group A, 75 % in group C and by 31 % in group B. In Stream change 77.09 % relief was seen in group C, 73.86 % in group A and by 36.70 % in group B. In Hesitancy 80.00 % relief was seen in group A, 25 % in group C and B. Urgency relieved completely in group A & B where as in group C relief seen was only 64 %. Dysuria disappeared completely in group A & B where as in group C relief was seen 27.53 % only. Incontinence was relieved 100 % in group A, 66.67 % in group C and 25 % in group B. Haematuria was relieved up to 100 % in group A & B, where as in group C 66.67 %. Residual urine volume was reduced 87.90 % in group A, 76.06 % in group C and 45.50 % in group B. The study concluded that *Devdarvyadi* Compound is an effective formulation for *Mutraghata*.

Role of *Punarnavadi* Compound in the Management of *Mutraghata* w.s.r. to BPH.^[12] The study planned with objective to evaluate the role of *Punarnavadi* compound as a safe and effective medical treatment for the *Mutraghata* w.s.r. to BPH. For that purpose 22 patients of *Mutraghata* were selected and divided into two groups. In group-A (n=12) *Punarnavadi* compound *Vatee* (*Punarnava*, *Varuna*, *Gokshura*, *Pashanabheda*) 1g three times a day orally was given for 2 months. In group-B (n=10) patients were treated with placebo therapy of empty capsule in a dose of 1g three times a day for two months as a control group. Average 50% and 5.88% relief was noticed in residual urine, average 50% and 0% relief was noticed in mean urine flow rate, average 11.34% and 0.18% relief was noticed in total WBC count, average 21.59% and 1.0% relief was noticed in blood urea in group-A and group-B respectively.

A Clinical Evaluation of *Mahayavanala Roma Kshara* and *Uttara Basti* of *Tail* in the Management of *Mutraghata*.^[13] In this study Total 12 patients were registered. Initially the Patients were advised to follow the '*Pathya*' regimen like, *Takra*, *Ksira*, *Masuya*, *Dadhi*, *Mudga yusa* and *Usna jala*. *Mahayavanala Roma Ksara* 500mg BD orally given for 30 days in *Apana Kala* in capsule form and *Uttara Basti* of *Tail* 30-50ml which is mentioned under *Vataja Mutrakriccha Chikitsa* was given for 15 days.^[14] The following ingredients were used for the preparation of *Tail*

i.e. (*Tila taila*, *Goghrita*, *Gokshura*, *Pasanbheda*, *Jalakumbhi* (*Pistia stratiotes*), *Hapusa* (*Juniperus communis*), *Kantakari* (*Solanum surattense*), *Bala* (*Sida cordifolia*), *Shatavari* (*Asperagus racemosus*), *Rasna* (*Pluchea lanceolata*), *Varuna*, *Aparajita* and *Vidarigandhadi gana dravyas*). after the completion of study, Relief in subjective complaints i.e. 50% in Nocturia, 55.55% in Straining to begin urination, 67.85% in weak stream, 42.84% in Difficulty to postpone urination, 56.09% in Prolongation of voiding time, 58.53% in Diurnal urination, 52.08% in feeling of Incomplete emptying were found. Residual urine volume was significantly reduced up to 58.46% whereas statistically highly significant result was found in increase in the mean urine flow rate (23.25%).

Role of *Mustadi Kalpa* in the management of *Mutraghata* w.s.r. to Benign Prostatic Hyperplasia. [15] The study was designed with aim to find clinical efficiency of *Mustadi Kalpa* (*Musta*, *Haritaki*, *Devadaru*, *Murva*, *Yashtimadhu*) in *Mutraghata* (Benign Prostatic Hyperplasia). In this study 22 patients of *Mutraghata* were registered and treated with *Mustadi Kalpa* orally in powder form 10gm/day with lukewarm water in *Apana Kala* for 3 weeks. After assessment of total effect of therapy, significant relief on the subjective as well as in objective parameters was recorded. The subjective complaints were relieved significantly in the range of 27 to 56 %. Residual urine volume was significantly reduced by 28.00% whereas statistically highly significant result was found in increase of 22.55% in the mean urine flow rate. This therapy showed insignificant changes in prostate gland enlargement after treatment.

A clinical study on the role of *Devdarvyadi Kashaya* and *Dashamoola-Siddha-Taila Uttara Basti* in the management of *Mutraghata* w.s.r. to BPH.[16] In this study *Devadarvyadi Kashaya* (*Devadaru*, *Musta*, *Murva* (*Marsdenia tenasissima*), *Haritaki* and *Yashtimadhu* (*Glycyrrhiza glabra*) 40 ml BD orally for 30 days in *Apana Kala* and *Dashamoola siddha Tail* (*Tila Tail* & the drugs of *Dashamoola*) *Uttara Basti* was instilled into the bladder with starting dose 30ml per day for 3 days consecutively and later on increased to 50 ml for 04days. Two sittings of seven days each were scheduled with a gap of seven days in between for the management of *Mutraghata*. For this study 15 patients were registered and after assessment it was observed that the symptoms

of *Mutraghata* were relieved significantly in the range of 67 to 93%. Residual urine volume was significantly reduced by 81%, where as a significant increase of 46% was recorded in the mean Urine flow rate. In some cases mild to moderate regression in prostate gland was also recorded.

Clinical evaluation of *Gokshuradi Kalpa* and *Yoga Basti* in the management of *Mutraghata* (w.s.r. to B.P.H.). This study was designed with aims to evaluate the clinical efficacy of *Pathya*, *Gokshuradi Kalpa* and *Yoga Basti* (*Anuvasana Basti* of *Dashmooladi Tail* and *Niruha Basti* of *Dwipanchmooladi Kwatha*) in the management of *Mutraghata*. [17] Total 28 patients were selected and they were divided into two groups, in group-A 14 patients treated with *Gokshuradi Kalpa* (*Gokshura*, *Varuna*, *Pashanbheda* (*Bergenia lingulata*), *Shunthi* (*Zingiber officinale*), *Mahayavnala Roma Kshara*, *Sita*) 6gm orally for 30 days in *Apana Kala*. In patients of group-B, 14 treated with *Gokshuradi Kalpa* and *Yoga Basti*. The duration of treatment of *Yoga Basti* was 8 days and two successive sittings with the gap of 7 days were done. After the completion of study period, significant relief was observed in subjective as well as objective parameters. Residual urine volume was reduced up to 79% where as significant increase (56%) was recorded in the mean urine flow rate. In consideration to weight of prostate gland, mild to moderate regression was found in some cases.

A Comparative clinical study on efficacy of *Mahayavanala Roma Kshara* and *Dhanyaka Gokshura Ghrita* in the management of *Vatashtheela* (Benign Prostatic Hyperplasia).[18] Total 24 patients were registered among them 10 patients were drop out. In group A (n=6) were completed the treatment with *Mahayavanala* (*Zea Mays* (*Indian Corals*) *Roma Kshara* capsule, 500 mg, BD for 45 days. In Group B (n=8) patients were treated with Orally *Dhanyaka Gokshur Ghrita* (*Dhanyaka*, *Gokshura*, *Ghrita*) 10gm two times a day for 45 days. Group treated with *Dhanyaka Gokshur Ghrita* was found more effective in comparison to group treated with *Mahayavanala Roma Kshara* in relieving prostate symptoms score as per calculation of unpaired t test $p=(<0.05)$. Residual urine volume was significantly reduced up to 79%, where as a statistically significant increase i.e. 56% in mean urine flow rate was recorded. In some cases mild to moderate regression in the

prostate volume was also recorded in both the groups.

Clinical Study on *Mutraghata* w.s.r. to Benign Prostatic Hyperplasia and its management with *Gokshuradi* Compound *Vatee* and *Dhanyaka-Gokshura Ghrita*.^[19] The study was planned to evaluate the clinical efficacy of *Gokshuradi* compound *Vatee* orally and *Dhanyaka Gokshura Ghrita Matra Basti* in 32 diagnosed patients of *Mutraghata*. All selected cases were randomly divided into three groups. In group-A *Gokshuradi* compound *Vatee* (*Gokshuradi Guggulu* added with *Kwath dravyas Punarnava* (*Boerhavia diffusa*) and *Devadara*) 500 mg was given orally three times a day for 21 days with lukewarm water after 1/2 an hour of taking food. In patients of group-B *Dhanyaka Gokshura Ghrita Matra Basti* 60 ml once a day for 21 days just after lunch. In Group- C *Gokshuradi* Compound *Vatee* and *Dhanyaka Gokshura Ghrita Matra Basti* was given. Statistically highly significant improvement was observed in average urine flow rate by 39.52 % in Group-A, by 31.65 % in Group-B, by 55.68 % in Group-C. Significant improvement was observed in the size of prostate gland by 20.71 % in Group-A, by 18.08 % in Group-B and by 24.89 % in Group-C. Insignificant change was observed over post voidal residual urine volume in Group-A. In Group B, post voidal residual urine volume reduced up to 23.91 % which was found statistically insignificant where as significant improvement was observed by 25.17 % in Group-C. In overall assessment of therapy, Moderate improvement was seen in 3 patients (30.00 %), 4 patients (40.00 %) and 7 patients (70.00 %) in group A, B, and C respectively. Mild improvement was observed in 7 patients (70.00 %), 6 patients (60.00 %) and 3 patients (30.00 %) in group-A, B, and C respectively. At the end of therapy, none of patient had got complete cure in any of three groups. Overall group-C (54.09 %) has shown better result than group-A (45.67%) and group-B (47.99 %) in all parameters. There was no any untoward effect or adverse drug reaction (ADR) recorded during the entire duration of therapy among all the patients.

A Clinical Study on *Kanchanar Guggulu* and *Matra Basti* of *Dhanyaka Gokshura Ghrita* in the management of *Mutraghata* w.s.r. to Benign Prostatic Hyperplasia.^[20] In this study total 30 patients were selected and divided into three groups. In Group A *Kanchanara Guggulu*

(*Kanchnara* (*Bauhinia variegata* Blume.), *Triphala* contains *Haritaki* (*Terminalia chebula*), *Bibhitaki* (*Terminalia bellirica*), *Amalaki* (*Embllica officinalis*), *Trikatu* contains *Pippali* (*Piper longum*), *Maricha*(*Piper nigrum*), *Shunthi* (*Zingiber officinale*), *Varun* (*Crataeva nurvala*), *Ela* (*Eletaria cardamomum*), *Twaka* (*Cinnamomum zeylanicum*), *Tejpatra* (*Cinnamomum tamal*), *Guggulu* (*Comiphera mukul*)) was administered in a dose of 500 mg, three times a day, orally with lukewarm water. In Group-B *Dhanyaka Gokshura Ghrita* (*Dhanyaka* (*Coriandrum Sativum*), *Gokshura* (*Tribulus terrestris*), *Ghrita* (*Butyrum departum*)) was administered 60 ml, once daily as *Matra Basti* in *Apana Kala*. In group-C combined therapy was administered. Total duration of therapy in each group was 21 days and follow up was done for one month. Maximum improvement in sign and symptoms of BPH was seen in 3 patients (33.34 %), 5 patients (55.56 %) and 3 patients (33.34 %) in group A, B, and C respectively. Moderate improvement was seen in 4 patients (44.44 %), 4 patients (44.44 %) and 4 patients (44.44 %) in group A, B, and C respectively. Mild improvement was observed in 1 patients (11.11 %), 0 patients (00.00%) and 2 patients (22.22 %) in group A, B, and C respectively. The scholar was noted that none of patient had got complete cure and 1 patient was seen unchanged (11.11%) result in group A and better result was found in group B in all parameters.

DISCUSSION

The *Mutraghata* is a broad term and it can be considered as a syndrome, because it covers most of the pathological entity of the urinary system and classified into twelve / thirteen types. Based on the clinical symptomatology, it can be correlated with benign prostatic hyperplasia (BPH).The exact aetiology of BPH is not yet clearly understood. The concept of nodular hyperplasia in pathology of BPH has been established but its exact cause is still not known clearly. In fact, the development of BPH is multi-factorial phenomenon as there is no strong evidence for risk factors like smoking, vasectomy, obesity or high alcohol intake for developing clinical features of BPH. The only true factors related to the development of the disease are age and hormonal status.

Basti is considered as the most appropriate treatment for *Vata* predominant diseases. *Mutraghata* is an entity in which

vitiation of *Vata Dosha* takes place. In *Basti* therapy, *Anuvasana Basti* is indicated when *Vata* is vitiated with the involvement of *Kapha* and *Pitta Doshas* and the pathology is localized in the *Basti pradasha* (KUB region). *Matra Basti* is one kind of *Anuvasana Basti* in which the dose of *Snehadravya* is used in less quantity (maximum 60 ml). It is further said that administration of *Matra Basti* improves the general condition of the patients (*Balya*), nourishes (*Bhrihaniya*) him, normalizes the function of *Vata* and makes natural urges of urination, defecation easy in diseased conditions. So in most of the research studies *Anuvasana Basti* was selected in one group of patients.

In above research studies reviewed in this article, the drugs used are *Mustadi Kalpa* in which main ingredient is *Musta* having *Mutrala*, *Balya*, *Shothahara*, *Jvaraghna*, *Vishaghna* properties. *Devadarvyadi Kashaya* and *Gokshuradi Kalpa* are mainly having *Deepana*, *Pachana*, *Mutrala*, *Vatanulomana*, *Shothahara* action and it is supplemented by *Rasayana*, *Balya* effect which are essential properties in the management of *Mutraghata*. *Dashamoola siddha Tail* used for *Uttara Basti* as the ingredients of *Dashamoola* are well known for their *Shothahara*, *Vatahara* and *Mutrala* actions and the preparation in *Tail* also enhance the properties of the drugs as *Taila* is also known for its *Vataharaguna*. For the purpose of *Yoga Basti*, *Dashamooladi Anuvasana Basti* and *Dwipanchmooladi Niruha Basti* were used, as the drugs of *Dashamoola* are well known for their *Shothahara*, *Vatahara* and *Mutrala* properties. In *Dhanyaka Gokshura Ghrita Matra Basti Dhaanyak (Coriandrum sativum)* having *Tridoshaghna*, *Mutrala* and *Snigdha* actions while *Gokshura (Tribulus terrestris)* contains *Anulomana*, *Basti Shodhana*, *Vedana Sthaapana* and *Mutrala* properties. In the addition to this, because of *Ghrita* is selected which is the best *Sneha* and having "*Sanskaarasya- Anuvartana*" property and also enhances action of the drugs processed with it. In *Gokshuradi* compound *Vatee* two more drugs were added i.e. *Punarnavaa (Boerhavia diffusa)* and *Devadaaru (Cedrus deodara)* in the classical formulation of *Gokshuradi Guggulu* as *Kwatha Dravyas* due to their potent *Vata-shamaka*, *Shothahara*, *Lekhana*, *Basti Shodhana* and *Mutrala* action, considering for better result in *Mutraghata*. The entire ingredients in this formulation have *Ushna Veerya*, *Kashaya*, *Madhura* and *Tikta Rasa*, *Ruksha*, *Ushna* and

Teekshna Guna and *Katu Vipaka*. In the classic *Kanchanar Guggulu* was mentioned in management of *Gandamala*, *Apachi*, *Arbuda*, *Granthi* etc. It is made up of *Kanchanar twak*, *Triphala*, *Trikatu*, *Varun*, *Ela*, *Twak*, *Patra*. Due to its *Vata-Kaphahara*, *Shothahara*, *Lekhana* and *Mutrala* effect and the selected drugs are shown better result in *Mutraghata*.

CONCLUSION

The review of research studies conducted on *Mutraghata* showed that the *Mutraghata* (Benign Prostatic Hyperplasia) can be best treated with *Ayurvedic* formulations as mentioned. The best treatment in the geriatric age is *Basti chikitsa*, so *Uttara Basti*, *Matra Basti* and *Yoga Basti* used in these research studies shown the better improvement in the BPH. In most of the studies better improvements was noted in the symptoms like dysuria, hesitancy, nocturia and reduction of residual urine volume. Mild to moderate regression in the prostate volume was also recorded and noticeable point is the quality of life was improved in these studies. No any adverse effect of any drug was noted in these study means treatment mentioned in review studies was well tolerable.

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REFERENCES

1. Sharma AR. *Sushruta Samhita* Vol-III (*Uttaratantra* Chp.58). Varanasi; Chaukhamba Surbharati Prakashan; 2008. p.473.
2. Williams NS, Bulstrode C JK, and O'Connell PR. *Bailey & Love's Short Practice of Surgery*. 26th Edition, New York, London; CRC Press; 2013. p. 1342
3. Das S. A Concise Text Book of Surgery. 7th Edition, Kolkata; Dr. S. Das Publications; 2012. p. 1276
4. Sharma AR. *Sushruta Samhita* Vol-III (*Uttaratantra* Chp.58). Varanasi; Chaukhamba Surbharati Prakashan; 2008. p. 29-72.
5. Shukla AV, Tripathi RD. *Charaka Samhita* Vol-II (*Chikitsasthana* Chp.26). Delhi; Chaukhamba Sanskrita Sansthan; 2007. p. 47-74.
6. Gupt Atrideva, Hindi commentary. *Vridhha Vagbhata, Ashtanga Sangraha*

- (Chikitsasthana Chp.13). Varanasi; Chaukhamba Prakashana; 2005. p. 3-23.
7. Misra BR. *Bhavaprakasa* Vol-II (*Uttarardha* Chp.36). Varanasi; Chaukhamba Sanskrit Bhawan; 2013. p. 36-58.
 8. Pandit Vidyasagar PS. Sarngadhara. *Sarangadhara Samhita* (II Part Chp.7-9). Varanasi; Chaukhamba Surbharati Prakashan; 2006. p. 24-50.
 9. Baghel MS, Girish KJ. *Ayurveda* Research Database. Jamnagar; 5th Edition, 2014.
 10. Raut SY, Singh K. Clinical studies on *Mutraghata* (Benign Prostatic Hyperplasia /BPH), PG Thesis, Gujarat Ayurved University, Jamnagar. 1987.
 11. Sharma PK, Singh K. Role of *Devadarvyadi* Compound and *Basti* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 1990.
 12. Joshi JH, Singh K. Role of *Punarnavadi* Compound in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 1995.
 13. Kembhavi AS, Singh K, Sathaye UV, Mehta SR. Clinical Evaluation of *Ksara* and *Uttara Basti* in the Management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 1998
 14. Sharma AR. *Sushruta Samhita* Vol-III (*Uttaratantra* Chp.59). Varanasi; Chaukhamba Surbharati Prakashan; 2008. p.483.
 15. Soni AB, Singh K, Ambasana BC Role of *Mustadi Kalpa* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 1999.
 16. Kulkarni NH, Singh K, Shukla RA. A Clinical study on the role of *Devadarvyadi Kashaya* and *Dashamoola siddha Taila Uttara Basti* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 2002.
 17. Malhotra D, Singh K. Clinical Evaluation of *Gokshuradi Kalpa* and *Yoga Basti* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 2003.
 18. Vasava YR, Bhuyan C, Rajgopala M. A Comparative Clinical study on efficacy of *Mahayavanala Roma Kshara* and *Dhanyaka Gokshura Ghrita* in the management of *Vatastheela* (BPH), PG Thesis, GAU, Jamnagar. 2009.
 19. Bhalodia SG, Gupta SK, Bhuyan C, Dudhamal TS. A Clinical study on *Mutraghata* (BPH) and its management with *Gokshuradi* Compound *Vatee* and *Dhanyaka Gokshura Ghrita Matra Basti* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 2011.
 20. Patel JK, Dudhamal TS, Gupta SK, Mahanta VD. A Clinical Study on *Kanchanar Guggulu* and *Matra Basti* of *Dhanyaka-Gokshura Ghrita* in the management of *Mutraghata* (BPH), PG Thesis, GAU, Jamnagar. 2013

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