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Preferred methods of Diagnosis and Treatment of Benign Prostatic Hyperplasia adopted by Ayurveda practitioners - A Survey Study

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ABSTRACT

Introduction: Benign Prostatic Hyperplasia (BPH) refers to the nonmalignant growth of prostate gland. In Ayurveda, it can be correlated with *Mutraaghata* or *Mutradosha*. Currently used common oral medications such as 5 α -reductase inhibitors, α 1-Blockers as well as surgical treatment methods such as Transurethral Resection of the Prostate (TURP) have well-known side effects. Ayurveda case studies on BPH show evidence of a potential alternative to these current methods. **Objectives:** To conduct a survey to know the diagnostic methods and treatment modalities used by different Ayurveda Practitioners in BPH treatment. **Materials & Methods:** A survey comprising 7 questions in the form of multiple-choice questions on the diagnosis and treatment methods of BPH adopted by Ayurveda Physicians was done. The answers were recorded and interpreted in the form of graphs and pie charts. **Results:** A total of 57 different Ayurveda practitioners participated in the survey. Prevalence of BPH was seen more in the age group of 60-70 years. Ultrasonography (USG) and Prostate Specific Antigen (PSA) were among the most commonly used diagnostic methods for BPH. Most common symptoms observed were increased frequency of urine, urine incontinence and urine urgency. *Uttara Basti* (administration of medicine through the urethra) was the most recommended type of treatment procedure preferred, followed by *Matra Basti* (enema). *Avagaha Swedana* (Sitz bath) was recommended by most practitioners. The course duration of treatment is advised to be around half to one month. Around 40-60% relief was claimed in patients with BPH by the participants. **Conclusion:** BPH is a condition that is currently being treated by various Ayurveda practitioners using classical treatment methods such as *Uttara Basti*, *Matra Basti* etc. with claimed relief of about 40-60% by the participants.

Key words: *Avagaha Swedana*, *Benign Prostatic Hyperplasia*, *Bladder Outlet Obstruction*, *Lower Urinary Tract Symptoms*, *Mutraaghata*, *Prostatomegaly*, *Uttara Basti*

INTRODUCTION

Benign Prostatic Hyperplasia (BPH) refers to the nonmalignant growth of the prostate gland, mostly found in ageing men. Most common symptoms of BPH typically include urinary urgency, frequent urination, involuntary urination, urge incontinence, urinary hesitancy, intermittency, weak urinary stream, nocturia

etc.^[1]

Modern treatment methods include oral medications such as 5 α -reductase inhibitors, α 1 Adrenergic Antagonists (α 1-Blockers), Muscarinic Receptor Antagonists (MRAs) or combined therapies. Common side effects of these oral medications include postural hypotension, ejaculatory dysfunction, erectile dysfunction, gynecomastia, pruritis, constipation, acute urinary retention etc.^[4]

Surgical treatment methods include Transurethral Resection of the Prostate (TURP), Holmium Laser Enucleation of the Prostate (HoLEP), Greenlight laser therapy, Prostatic urethral lift, Prostate Artery Embolization, Robot-assisted simple prostatectomy etc. These methods also come with their share of side effects. ^{[5][6]} Thus, there is a need to find treatment methods with minimal or no side effects.

In Ayurveda, symptoms of BPH can be related to those of *Mutraaghata* as mentioned by *Acharya Sushruta*,

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and *Mutradosha* according to *Acharya Charaka*. There are 12 types of *Mutraaghata* described by *Acharya Sushruta*^[2] and 13 types of *Mutradosha* described by *Acharya Charaka*.^[3]

There have been many studies already done to cure patients with BPH using classical treatment methods mentioned in *Ayurvedic* texts. So, a survey was conducted to assess the approach of various *Ayurveda* practitioners for the treatment of BPH.

MATERIALS AND METHODS

An online survey was developed which comprised of 7 questions in the form of MCQs. It was circulated among various *Ayurveda* practitioners working in private clinics, hospitals, and doctors in the northern part of India via email and social media groups. Data such as participant’s names, qualification, contact details etc. were collected. Survey data was collected, recorded and interpreted in the form of graphs and pie charts. The questionnaire of the survey data sheet included:

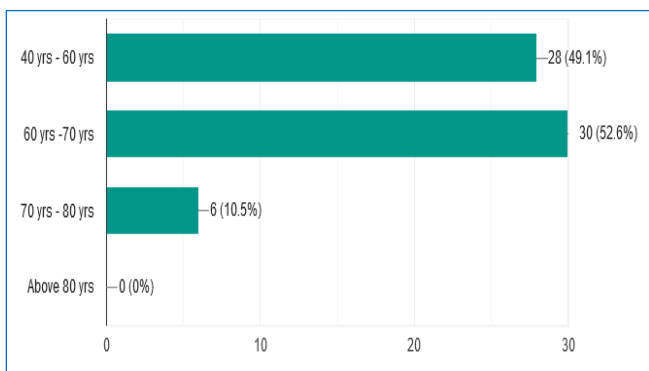
Table 1: Survey questions and response choices

SN	Questions	Choices
1.	What is the most common age group of patients treated by them?	a) 40 yrs – 60 yrs b) 60 yrs – 70 yrs c) 70 yrs – 80 yrs d) Above 80 yrs
2.	What were the most common complaints / symptoms of patients with BPH?	a) Frequent Urination b) Urinary Incontinence c) Pain during or after micturition d) Urinary Urgency e) Burning Sensation during micturition f) Nocturia g) Urinary Retention h) Weak or Interrupted Urine Stream i) Trouble Starting a Urine Stream j) Hematuria

3.	What was / were the diagnostic method / methods used you for the diagnosis of BPH?	a) Based on Symptoms b) Prostate Specific Antigen (PSA) c) Ultrasonography (USG) d) Prostate MRI e) Cystoscopy f) Renal Function Test g) Urine Examination – Routine and Microscopic h) Digital Rectal Examination i) Based on the International Prostate Symptom Score (IPSS) Uroflowmetry
4.	Which <i>Basti</i> would you recommend or use for treating BPH?	a) <i>Niruha Basti</i> b) <i>Anuvasana Basti</i> c) <i>Matra Basti</i> d) <i>Uttara Basti</i> e) Oral Medication
5.	Will you recommend / include <i>Avagaha Swedana</i> as a <i>Poorvakarma</i> of <i>Basti</i> for BPH?	a) Yes b) No
6.	What is the usual course of duration for the above-mentioned therapies / procedures?	a) 0-7 days b) 8-15 days c) 16-30 days d) >30 days e) Depending upon the condition of the disease f) For 1 week followed by a certain gap period and again use the planned intervention.
7.	How much relief was observed in the patients with the above treatment?	a) <20% b) 20%-40% c) 40%-60% d) 60-80% e) >80%

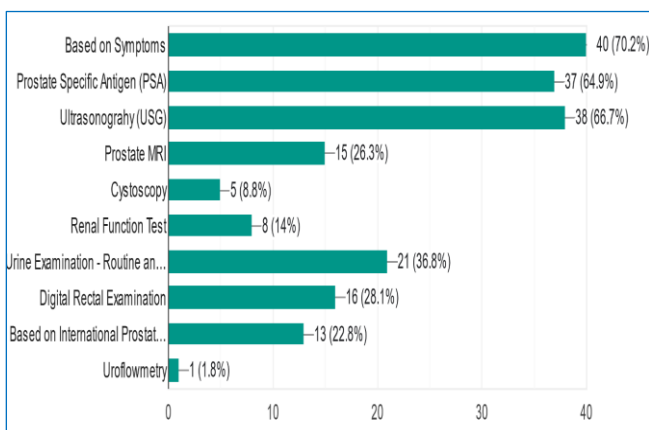
OBSERVATIONS AND RESULTS

A total of 57 Ayurveda practitioners participated in the online survey. The responses were recorded in the form of graphs and pie charts. As per the responses from 57 participants, the prevalence of BPH was most commonly found in the age group of 40 to 60 years by 28 (49.1%) participants, in 60 to 70 years by 30 (52.6%) participants and in 70-80 years by 5 (10.5%) participants. (Graph 1)



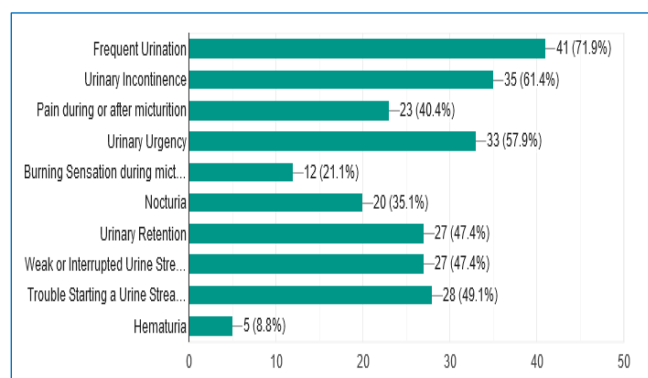
Graph 1: Most common age group of patients with BPH

For the diagnostic criteria, diagnosis based on symptoms was answered by 40 participants (70.2%), PSA score by 37 participants (64.9%), Ultrasonography by 38 participants, Prostate MRI by 15 (26.3%) participants, Cystoscopy by 5 participants (8.8%), Renal Function Test by 8 (14%) participants, Routine and Microscopic Urine Examination by 21 participants (36.8%), Digital Rectal Examination by 16 participants (28.1%), diagnosis based on International Prostate Symptom Score by 13 (22.8%) and Uroflowmetry by 1 (1.8%). (Graph 2)



Graph 2: Basis of diagnosis of BPH

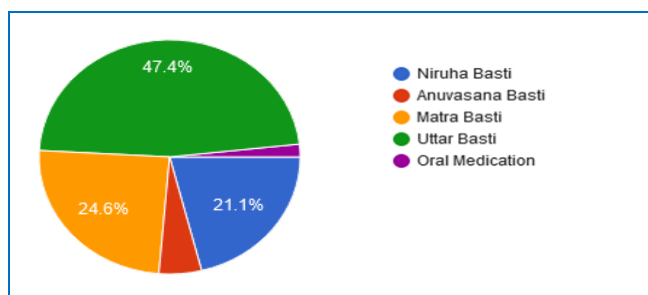
Frequent Urination was one of the most common symptoms observed by 41 participants (71.9%), followed by Urine Incontinence by 35 (61.4%) participants, pain during or after micturition by 23 (40.4%) participants, Urinary Urgency by 33 (57.9%) participants, burning sensation during micturition by 12 (21.1%) participants, Nocturia by 20 (35.1%), Urine retention 27 (47.4%), weak or interrupted urine stream by 27 (47.4%), trouble starting a urine stream by 28 (49.1%) and hematuria by 5 (8.8%) participants. (Graph 3)



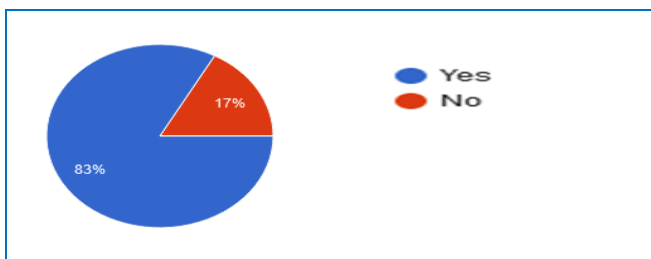
Graph 3: Most common symptoms observed in patients with BPH

When asked about the most preferable type of *Basti*, 47.4% of participants chose *Uttara Basti* as the recommended *Basti* that should be given to patients of BPH. 24.6% of participants recommended *Matra Basti* is the preferred type, followed by *Niruha Basti* recommended by 21.1% of participants. (Graph 4)

When asked if the participants would include *Avagaha Swedana* (Sitz Bath) as a part of their treatment, 83% of the participants agreed that they recommended *Avagaha Swedana* in BPH, while 17% disagreed and did not recommend using it as a part of their treatment. (Graph 5)



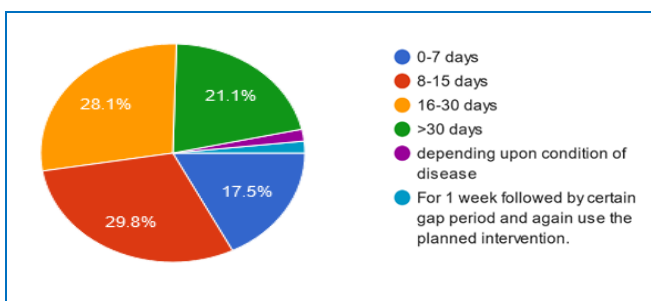
Graph 4: Preferred type of treatment



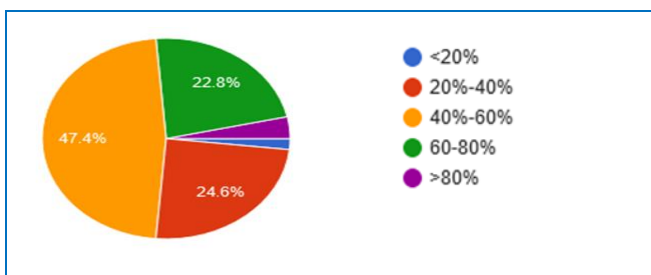
Graph 5: Avagaha Swedan recommendation

When the participants were asked how long they would recommend giving the above-mentioned therapies/treatments to patients with BPH, 29.8% of participants recommended 8-15 days, followed by 28.1% participants for 16-30 days, 21.1% for more than 30 days, 17.5% for 0-7 days. 1 of them (1.7%) is recommended to treat depending on the condition of the disease. A small group of participants (1.7%) chose to give the treatment depending upon the severity of the disease and the rest of them recommended giving treatment for 1 week, followed by a certain gap period, and again using the planned intervention. (Graph 6)

47.4% of the participants claimed 40-60% relief in patients after treating them with Ayurveda therapies and medications, 24.6% claimed 20%-40% relief, followed by 22.8% of participants who claimed 60-80% of relief in patients, remaining 3.5% claimed more than 80% relief in patients, and 1.7% participants claimed less than 20% relief in patients of BPH. (Graph 7)



Graph 6: Course of duration of treatment



Graph 7: Relief observed in patients

DISCUSSION

Benign Prostatic Hyperplasia (BPH) is a condition that greatly affects the quality of life of the elderly. The present treatment modalities are known to have many complications. *Mutraaghata* being a *Saadhya* (treatable) condition as per *Ayurveda*, holds resemblance with the symptoms of BPH. Therefore, in many studies, the BPH is treated with the same methods that are mentioned for *Mutraaghata* in the ancient *Ayurvedic* texts.

According to this survey, the prevalence of BPH was mostly seen in the patients lying in the 60-70 yrs age group. As per a study, the size of the Prostate Gland increases with age in males. It was demonstrated that across a wide spectrum of racial and ethnic groups, prostate size increases from 25 g to 30 g for men in their 40s to 30 g to 40 g for men in their 50s and 35 g to 45 g for men in their 60s. Also, the histologic prevalence of BPH, according to a study, is found to be approximately 10% for men in their 30s, 20% for men in their 40s, reaches 50% to 60% for men in their 60s, and is 80% to 90% for men in their 70s and 80s.^[7] Hence, it establishes the fact that BPH and its symptoms are more prevalent in age >60 yrs.

The diagnosis is made mostly using Ultrasonography (USG) of the prostate region, levels of Prostate Specific Antigen (PSA) and based on symptoms. Symptoms are diagnosed and scored mostly using the International Prostate Symptom Score (IPSS) scale developed by American Urological Association (AUA). Other diagnostic methods that are also used are digital rectal examination, prostate MRI, cystoscopy, uroflowmetry, urine culture test, etc.

According to one study, the accuracy of transabdominal ultrasonography for benign lesions was 91.66%.^[13] USG remains the most common tool used for the diagnosis of BPH, as it can help examine both size and volume of the prostate gland. Post Void Residual Urine Volume can also be calculated with the help of USG. Early studies suggested that PSA density could help differentiate between BPH and early nonpalpable cancer, especially at serum levels of 4.0 to 10.0 ng/mL.^[14] Mostly, preliminary diagnoses can be

made using symptoms that are mostly specific to BPH in elderly patients. Hence, it becomes an important aspect in the diagnosis of any condition, here particularly in BPH.

Frequent urination, urine incontinence and urgency were among the most observed symptoms by the participants. BPH may lead to Bladder Outlet Obstruction (BOO) with high bladder pressures and low flow, which in turn leads to detrusor wall hypertrophy. Many of these men will only have lower urinary tract symptoms (LUTS) but a significant number will also suffer the other complications of BPH. These include urinary retention (acute and chronic), haematuria, urinary tract infection, bladder stones, bladder wall damage, renal dysfunction, incontinence and erectile dysfunction.^[15]

Mutraaghata is believed to be a disorder mainly caused by the vitiation of *Vata Dosha*.^[8] *Basti* (enema) treatment has been defined as the best treatment for *Vata*. In the context of urinary disorders, *Uttara Basti* has been specifically described along with other procedures.^[9] Unlike an enema, *Uttara Basti* is a method where medicine is injected through the urethra in males, and in the urethra or vaginal canal in females. *Ashrani* and *Sumedh* report that *Uttara Basti* with *Ushiradi Taila* given on a repeat interval of 3 days had significant results in the symptoms of BPH.^[16]

Matra Basti is also a type of *Basti*, where medicated oil is pushed through the anal canal. *Matra Basti* with *Dhanyak Gokshura Ghruta* given for 15 days in a month for 2 months along with *Karkati Beeja* powder 5g two times a day for 2 months showed, symptomatic relief and there was a significant decrease in prostate weight and post residual urine volume.^[17] In many previous studies, *Uttara Basti* and *Matra Basti*, both have been shown to be very effective in treating BPH.^{[10][11]} There have been various opinions regarding the choice of *Basti* in BPH, but *Uttara Basti* is a type which is described by all the *Acharyas* for *Mutraaghata*.

For the treatment of complications caused by holding the natural urges like micturition, defecation etc., *Avagaha Swedana* (sitz bath) has been mentioned in *Ayurveda* texts, which is a type of sudation in which the

patient is made to sit in a tub filled with hot water or medicated decoction. *Apaturkar et al.* in their study administered *Laghu Panchamoola Kwatha* 30 ml two times before meals and for *Avagaha Swedana* 3 times a day for a total duration of 45 days in BPH. They found 50% relief in incomplete voiding, frequency, intermittency, straining, weak stream & Nocturia followed by 66.6% relief in urgency.^[18] *Kanchanara Guggulu* has also been shown effective in various studies.^{[11][12]} In *Mutraaghata*, the obstruction is known to be caused by *Kapha Dosha* along with *Vata*, and *Kanchanara Guggulu*, having the effect of *Vata-Kapha Dosha*, and also is used in the treatment of cysts or any abnormal growth, is also effective in treating BPH. *Kanchanara Guggulu* contains kaempferol and quercetin flavonoids which prevent estrogen receptor conditions such as urinary incontinence and urogenital atrophy.^[19] *Kanchanara Guggulu* has *Triphala* and *Trikatu* as constituents 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.^[20]

As for the duration of treatment, *Uttara Basti* and *Matra Basti* are usually administered for a minimum period of 7-8 days or more, as per the severity of the condition. In this survey, the duration of treatment was advised mostly for half to one month which can include both, therapies (enema etc.) and oral medications.

As per the survey, most of the practitioners claimed 40-60% relief in the overall condition of patients. This can be mostly based on the improvement in the chief complaints and symptoms of patients. The amount of relief can also depend on other factors, such as the chronicity and severity of the condition, age of the patient, the choice of medications etc.

Recommendations

Though the sample size of the survey was small, and the questionnaire only consisted of 7 questions, a large study can be done with a larger group to further know the variety of treatments adopted by *Ayurveda* practitioners pan India or worldwide, including the *Ayurveda* formulations used in procedures and oral

medications. Cross-sectional studies can also be done to get a wider perspective of the condition.

CONCLUSION

In this survey, we came to know about the most used diagnostic methods, treatment methods, age group, symptoms and relief observed in patients with BPH as per the experience of different *Ayurveda* practitioners. The prevalence of BPH was most commonly seen in the age group of 60 to 70 years, followed by 50 to 60 years. It is clear that *Ayurveda* treatment modalities can help relieve the symptoms of BPH by up to 40-60% in most cases. Out of many diagnostic methods available, USG and PSA along with the assessment of symptoms prove to be a reliable basis of an investigation in most of the cases. *Uttara Basti* and *Matra Basti* remain the choice of treatment modalities among *Ayurveda* practitioners. These can be a better alternative to currently widely used treatment options such as alpha-blockers etc. which come with a fair share of side effects.

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