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AN AYURVEDIC APPROACH IN THE MANAGEMENT OF BENIGN PROSTATIC HYPERPLASIA

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ABSTRACT

Background Benign prostatic hyperplasia is one of the most common obstructive uropathy process which affecting the aging males. About 50% of males over 60 years of age are suffering from this disease and this number increases 90% by age of 85years. The symptom complex of BPH and '*Mutrakricchra'* and '*Mutraghata'* (Lower urinary tract disorders in Ayurvedic texts) seems to be overlapping each other but, Acharya *Dalhana*, *Chakrapani*, and *Vijayarakshita* have demarcated the difference between them. This difference is based on the intensity of **"***Vibhanda***"** or **"***Avarodha***"** (obstruction) which is more pronounced in *Mutraghata*. Hence, it may be considered that the *Mutraghata* is a condition in consequence with some kind of Obstructive Uropathy mechanical or functional. **Aim and Objectives:** To suggest an ayurvedic treatment modality in BPH and assessing it with ultrasonographic assistance in phase by phase estimation of the proposed clinical study for BPH studies subsequently. **Materials and Methods:** Diagnosed patients of Benign Prostatic Hyperplasia, satisfying the inclusion criteria were randomly by table method, and divided into following three groups. A total of 132 patients were enrolled in the present trial of which 12 patients were dropout/lost in follow up not. Patients were allocated in three groups. Group A: *Shilajit* (250mgs twice daily), *Dashmoola qwath* (25ml twice daily) and *Sharkara* (12grams twice daily) oral for 40 patients, Group B: 40 patients were subjected to *Uttar-vasti* of *Narayan taila* (2ml). Group C: 40 patients was subjected to the treatment consisting *Shuddha Shilajit* (250mgs twice daily), *Dashmoola qwath* (25ml twice daily) and *Sharkara* (12grams twice daily) oral and Uttar-vasti of Narayan taila (2ml daily). The treatment was continued for 3 months and follow-up for one year. **Result:** Group C showed statistically significant results in all the subjective and objective parameters. **Conclusion**: The effect and the mode of action of oral drugs as well as Uttar-vasti of a special formulation described in classic (Shuddha *Shilajit , Dashmoola qwath, Sharkara*, *Uttar-vasti* of *Narayan taila*) works well in the treatment of BPH.

Keywords: BPH, management, uropathy, *Shilajit, Mutraghata*

INTRODUCTION

Benign prostatic hyperplasia is one of the most common obstructive uropathy process which affecting the aging males. About 50% of males over 60 years of age are suffering from this disease and this number increases 90% by age of 85years. Increasing gland size is considered a normal part of the aging process.[1] BPH involves the stromal and epithelial element of the prostate arising in the periurethral and transition zone of the gland. It is well recognized fact that two thing are responsible for induction of this disease are, testes and aging, which suggests that the prostatic growth is regulated by androgens. It has been established that higher serum androgen level is responsible for enlargement of prostate, which is confirmed by the regression of prostate after deprivation of androgens. The voiding dysfunction that results from prostate gland enlargement and bladder outlet obstruction is termed lower urinary tract symptoms (LUTS). It has also been commonly referred to as prostatism, although this term has decreased in popularity. These entities overlap, not all men with BPH have LUTS, and likewise not all men with LUTS have benign prostatic hyperplasia.[2]

The symptom complex of BPH and '*Mutrakricchra'* and '*Mutraghata'* (Lower urinary tract disorders in Ayurvedic texts) seems to be overlapping each other, but, Acharya *Dalhana*, *Chakrapani*, and *Vijayarakshita* have demarcated the difference between them. This difference is based on the intensity of **"***Vibhanda***"** or **"***Avarodha***"** (obstruction) which is more pronounced in *Mutraghata*.[3] Hence, it may be considered that the *Mutraghata* is a condition in consequence with some kind of Obstructive Uropathy mechanical or functional; related either to upper or lower urinary tract resulting in to either partial or complete retention of urine as well as Oliguria or Anuria. The present study is concerned with the subject '*Mutraghata'*, a disease afflicting '*Mutravaha Srotas'*.

***Mutraghata*:**

Mutraghata is an important group of *mootrarogas* as described in *ayurvedic* texts. The term *mutraghata* is derived from the words *Mootra* and *Aghata* meaning there by obstruction and suppression of urine outflow. There is great deal of controversy regarding meaning of *mutraghata. Dalhana* explained *mutraghata* as *mootra avarodha* (obstruction of urine). However, sometimes '*Aghata*' means vitiation of urine instead of obstruction of urine, as *mootrashukra* and *mootrasada* have no obstruction[4]. In this regard, definition of *vijayarakshita,* author of *Madhu kosha* seems more accurate and acceptable. According to his view, there will be more pain and little obstruction in *mutrakricchra* while in *mutraghata* there is more obstruction with little pain. It can be said that the *mukricchra* is symptom complex featured by dysuria, while *mutraghata* is obstructive uropathy. In fact, *mutraghata* is not a single disease but it as a group of diseases presenting with decreased amount of urinary outflow as a chief clinical feature. Therefore *mutraghata* is considered as major obstructive uropathy as well as suppression of urine formation.

The disease *Vatastheela*, one of the 13 Mutraghata disorders, can be correlated with BPH on the basis of its *Sthana* (place), which is

between *Guda* and *Basti*, and also on the basis of the correspondence of the symptoms and signs. Most of the features of *Vatastheela* described by *Sushruta*, such as retention of urine (*Mutrasanga*), pain in suprapubic region, etc., are similar to the symptoms of BPH.

Aim and Objectives

To suggest an ayurvedic treatment modality in benign prostatic hyperplasia and assessment of the changes to be done by USG.

Materials and Methods:

The patients for the research were selected from Department of Shalya- Tantra OPD, M.S.M. Institute of Ayurveda, B.P.S. Mahila Vishwavidyalaya, Khanpur- Kalan, Haryana**.** Established and diagnosed patients satisfying inclusion/exclusion and criteria of assessment were divided into three trial groups (A, B and C). After having written and informed consent from the patient to participate in the study on a recorded and standardized proforma.

Diagnosed patients of Benign Prostatic Hyperplasia, satisfying the inclusion criteria were randomly by table method, and divided into following three groups. A total of 132 patients were enrolled in the present trial of which 12 patients were dropout/lost in follow up not included to meet the commitments of the synopsis, made earlier. A total of 120 patients were subjected in this trial after ramification into three trial groups.

The treatment in Group A consisted of Shuddha *Shilajit* (250mgs twice daily), *Dashmoola qwath* (25ml twice daily) and Sharkara (12grams twice daily) oral for 40 patients. The treatment was continued for 3 months and follow-up for one year.

In trial Group B, 40 patients were subjected to Uttar-vasti of Narayan taila (2ml). Detailed methodology was practically demonstrated as well as documented/written guidelines were also issued on a paper (predestined).

In trial Group C, 40 patients was subjected to the treatment consisting Shuddha *Shilajit* (250mgs twice daily), Dashmoola qwath (25ml twice daily) and Sharkara (12grams twice daily) oral and Uttar-vasti of Narayan taila (2ml daily) The treatment was continuing for 3 months and follow-up for one year.

Inclusion Criteria:

1. Patients who have obstructive uropathy caused by BPH.
2. Patients who are well established cases of BPH.
3. Patients who are in 1st, 2nd and 3rd degree of BPH.

Exclusion Criteria:

1. Patients who are suffering from grade 4th BPH.
2. Patients who are suffering from prostatic and urinary bladder carcinoma.
3. Patients who are suffering from obstructive uropathies other then BPH causes.
4. Patients who are suffering from HIV and Hepatitis B.
5. Patients who are suffering from Diabetes.
6. Patients who are > 70 years of age.
7. Patients who are suffering from acute and chronic renal failure.

Diagnostic Criteria:

All the patients will diagnose on the basis of below given criteria:

A. Clinical Sign and Symptoms:

1. Emptying of urinary bladder
2. Dribbling of urine

3. Weak and thin urine stream.
4. Increased frequency of urine.
5. Urgency.
6. Hesitancy.
7. Nocturia.

Investigations:

1. Hematological:

1. TLC, DLC, Hb%, ESR.

2. Biochemistry:

- Blood urea,
- Serum creatinine,
- Serum acid phosphatase.
- Urine –Routine and Microscopic

3. Ultrasonography-Transabdominal:

The USG evaluation will be done before and after the completion of trial. Same radiologist has done the USG to mitigate functional discrepancies. The size of gland will be assess on the basis of weight and graded accordingly.

C.Per-Rectal Examination: Done before, during and after the completion of trial, by the same examiner (myself) to combat any functional error.

Symptom Score: American Urology Association Symptom Scoring Index will be used for grading of the clinical features.

The American Urology Association Symptoms Scoring Index:

Symptoms:

1. Over the past month or so, how often have you had a sensation of not emptying your bladder completely after your finished urinating?
2. Over the past month or so, how often have you had to urinate again < 2 hours after you finished urinating?
3. Over the past month or so, how often have you found you stopped and started again several times when you urinated?
4. Over the past month or so, how often had you found it difficult to postpone urination?
5. Over the past month or so, how often have you had a weak urinary stream?
6. Over the past month or so, how often have you had so push or strain to begin urination?
7. Over the last month, how many times did you most typically get-up to urinate from the time you went to bed at night until the time you got-up in the morning?

None	-	(0)
One time	-	(1)
Two times	-	(2)
Three times	-	(3)
Four times	-	(4)
Five times	-	(5)

AUA symptom score =sum of questions A1-A7

Observations:

Table 1: Overall Result of Clinical Trials:

Outcome of Treatment	Group A (n=40)	Group B(n=40)	Group C (n=40)
Cured	0	0	0
Marked Improvement	17	8	25
Moderate Improvement	11	9	9
Slight Improvement	10	16	6
Unchanged	2	7	0
Deteriorated	0	0	0

The above table depicts the overall result in patients seen in all the three groups. **Complete cure** was not observed in any of the three groups.

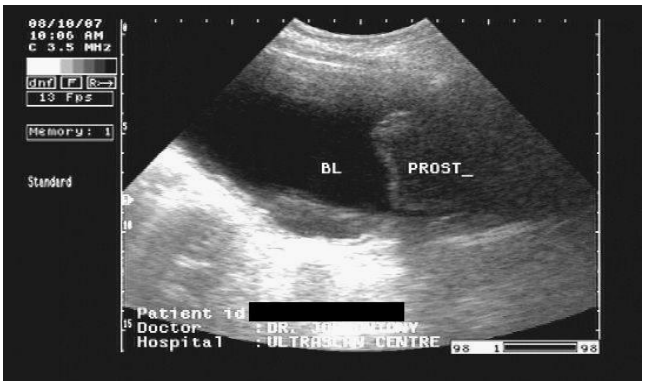
In Group A (*Dashmoola qwath,* Shuddha *Shilajit & Sharkara*): Shows marked improvement in 17 patients, moderate improvement in 11 patients, slight improvement in 10 patients, unchanged in 2 patients & deterioration (no improvement) in none of the patients.

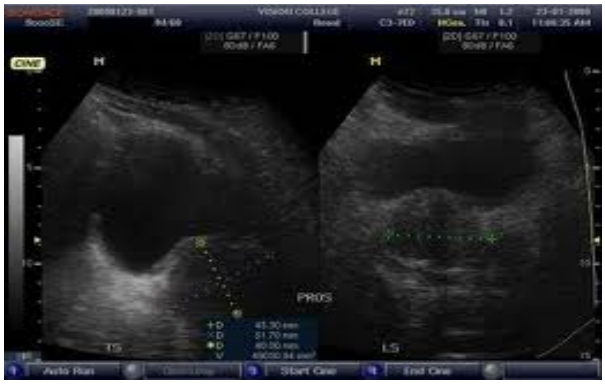
In Group B (*Uttar-vasti of Narayan Taila*): This group shows marked improvement in only 8 patients, moderate improvement in 9 patient's slight improvement in 16 patients, unchanged in 7 patients & deterioration (no improvement) in none of the patients.

In Group C (*Dashmoola qwath, Shuddha Shilajit & Sharkara & Uttar-vasti of Narayan Taila*): It showed marked improvement in maximum 25 patients, moderate improvement in 9 patients, slight improvement in 6 patients, unchanged & deterioration (no improvement) in none of the patients.

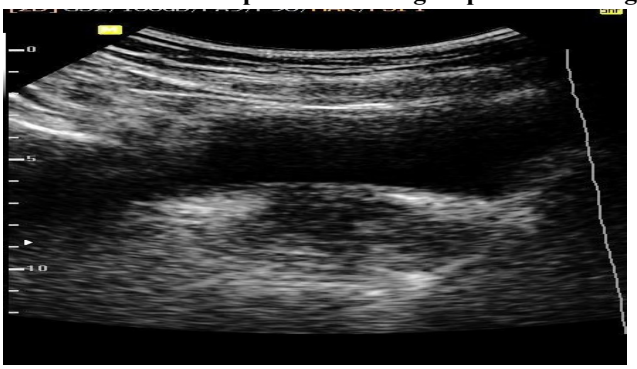
Benign Prostatic Hyperplasia Trans-abdominal Ultrasound

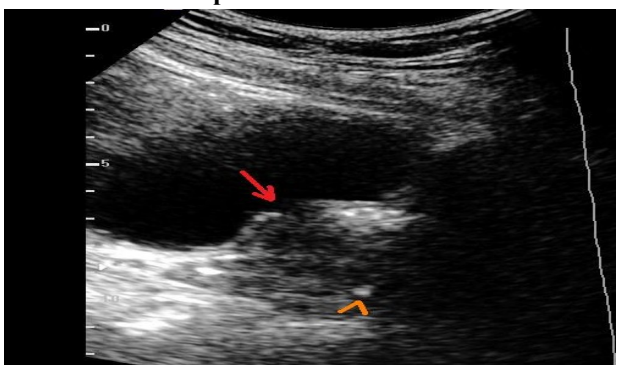
Effectiveness of Group 'A' as a trial group in decreasing size of Prostate as depicted in USG scan.



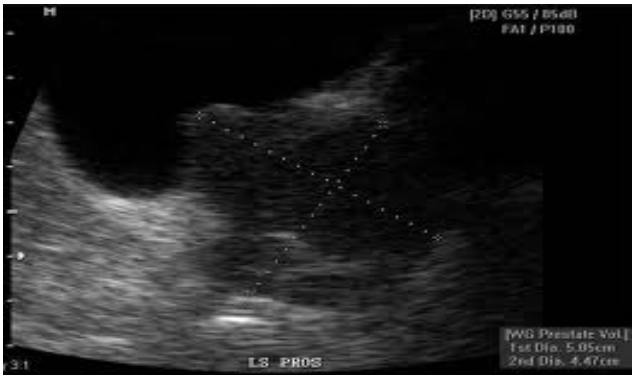


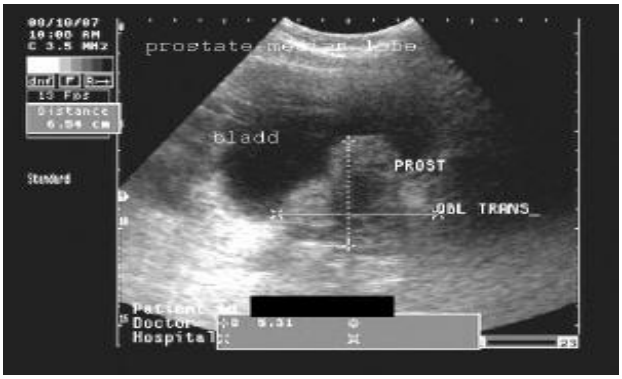
Effectiveness of Group 'B' as a trial group in decreasing size of Prostate as depicted in USG scan.





Effectiveness of Group 'C' as a trial group in decreasing size of Prostate as depicted in USG scan.





DISCUSSION

Textural references scrutinized from the literature for the quest of a formulation, revealed the effectiveness of 'Shuddha *Shilajit', 'Dashmoola Qwath'*[5] and *'Narayan Taila'* for the treatment of '*Ashtheela'*,[6] which when visualized in modern perspective stays compatible with B.P.H. Preparation of drug also esteemed the literature recommendations. *Dashmoola qwath* as oral and *Narayan Taila* as *Uttar –Vasti* subtly represent the systemic and local mode of administration of a treatment regimen. The motive behind this selection was to extend the domain of research i.e. systemic vis-à-vis local treatment. *Tila Tail* (sesame oil) has been suggested as a treatment for a variety of chronic inflammatory and hyperplasia disorders. There is an inverse relationship between the concentrations of lipid linoleic and linolenic concentrations and the rate of cell proliferation, i.e. the higher the rate of lipid linoleic and linolenic concentrations in the cells the lower the rate of cell division. Although BPH is diverse and heterogeneous in their nature, most BPH have at least two aspects in common, deregulated cell proliferation and suppressed cell death, which make interfering of cell survival or proliferation as two important anti hyperplasia strategies. It has been demonstrated that lipid linoleic and linolenic which are abundantly available in sesame oil caused the growth suppression of DU-145 cells. In comparison with BSA supplemented medium, DCC-FBS partially blocked the anti-proliferative effects of lipid linoleic and linolenic. *Narayana taila Uttar-Vasti* probably is absorbed through vesicular mucosa and these act locally and systemically. Locally some changes occur in prostatic tissue leading to decreases level of the Dihydrostestosterone (DHT) the accumulation of DHT is responsible for development of benign prostate hyperplasia. After reduction of DHT at prostatic tissue level the prostate tends to normal. Consequently the extra cellular concentration is higher than intracellular cytoplasmic concentration according to these effects the prostatic size reduced and prostate tends to normal volume.

Proposed/probable mode of action of *Shilajit* a (Bitumen) Certain combinations of the phenolic and triterpenoid constituents, and other active constituents of *Shilajit* produced significant effects against restraint proloiferative pathologies and BPH is one of the more common encountered in urological practice. The mechanism of anti-mitotic actions of *Shilajit* and its constituents was also evaluated. *Shilajit* and its combined constituents also elicited and activated, in different degrees, murine peritoneal mac-

rophages and activated splenocytes of tumour-bearing animals at early and later stages (unresponsive) of tumour growth.

Proposed/probable mode of action of *Dashmoola qwath:* NF-κB is a active phytochemical present in Dashmoola qwath. Research over the past decade has revealed that NF-κB is an inducible transcription factor for genes involved in cell survival, cell adhesion, inflammation, differentiation and growth. In most resting cells, NF-κB is sequestered in the cytoplasm by binding to the inhibitory IκB proteins that block the nuclear localization sequences of NF-κB. NF-κB is activated by a variety of stimuli, such as carcinogens, inflammatory agents, and tumour promoters, including cigarette smoke, phorbol esters, okadaic acid, H_2O_2 and TNF.

CONCLUSION

When estimating the difference of effectiveness of therapies in trial groups A, B and C, Group C (combined drug group i.e. *Shuddha Shilajit* - 250mgs, *Sharkara*- 12gms & *Dashmoola Quath*-25ml and *Uttar vasti* of *Narayana Taila*) was found to be superior on all the parameters except straining and stream improvement. In the above two symptoms Trial Group A was to be found more effective in managing the clinical features of BPH. *Narayana Tail* increase the mucosal surface area contact time of the drug which is used for the alleviation of the disease i.e BPH, with a corresponding increase in surface absorption of active chemical constituents of the drug and hence improvement of disease under trial i.e. BPH. It is further recommended to use it along with oral drug therapy in patients suffering from BPH. The complete cure of the symptoms were not seen in any of the trial groups so falsifying any claims regarding complete cure of BPH in ayurveda is clearly being diminished by the present clinical trial.

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