Evaluation of Ayurvedic therapy in management of Benign Prostatic Hyperplasia

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ABSTRACT

Benign Prostatic Hyperplasia (BPH) is a common condition that affects 50% of men in their 50th decade. There have been many advances in the treatment of this condition, which aim to improve the patient’s quality of life. Although there is no cure for BPH, but there are many useful options for treating the problem. Treatment focuses on prostate growth, which is the cause of BPH symptoms. Once prostate growth starts, it often continues unless treatment starts. The prostate grows in two different ways—in one type of growth, cell multiply around the urethra and squeeze it whereas in the second type of growth is middle lobe prostate growth in which cell grow into the urethra and the bladder outlet area. This type of prostate growth typically requires surgery. The first line of care for treating BPH is often medication. Efficacy of Vasti therapy an Ayurvedic therapeutic procedure was studied in 75 patients of Benign Prostatic Hyperplasia (BPH). The treatment was given for 21 days, and then the effect was assessed clinically and objectively. Objective observations include determination of size (weight) of prostate and residual urine in the urinary bladder by ultrasonography, estimation of blood urea, serum creatinine and routine, microscopic and microbiological study of urine was also done. After the therapy in 70.67% of 75 patients, the size of the prostate was found regressed, and in 82.14% of 56 patients, the residual urine volume was decreased along with other objective and subjective improvement.

INTRODUCTION

The Benign Prostatic Hyperplasia (BPH) is one of the commonest problems amongst obstructive uropathies affecting a large population of the elderly community (Darson et al., 2017; Abrams and Griffiths, 1979). Although this disorder is almost universal among aging men, its etiopathogenesis is poorly understood. Consequently, no constant, reliable medical therapy without complication is acceptable so far, and surgery is the only remedy with a lot of complication. (Chopra, 1970) In ayurvedic system of medicine vatastheela, a types of mu-traghata (obstructive urogpathies) closely resembles with Benign Prostatic Hyperplasia on the basis of clinical feature and is supposed to be a result of vitiation of Apana vayu (a type of vata dosha) and the Vasti Chikitsa is considered as the treatment par excellence for vatika disease. (Chikitsasthana, 1979; Sutrasthana, 1984)
static size (weight) along with the amount of resid-
ual urine before and after the treatment in addition
to clinical observations and laboratory findings.

MATERIALS AND METHODS

The present study was conducted on 75 patients of
BPH, presenting with or without indwelling catheter
along with different symptoms of prostatism, in the
Department of Shalya-Shalakya, S.S. Hospital, BHU,
Varanasi. The patients were selected by clinical ex-
amination of urine with culture study along with
other investigations.

Grading of the enlargement of prostate

Grade I: Weight of prostate was up to 29 gms.
Grade II: Weight of prostate was in the range of 30-
59 gms.
Grade III: Weight of prostate was in the range of 60-
89 gms.
Grade IV: Weight of prostate was more than 90 gms.

Method of Treatment

The patients were treated with Ayurvedic modal-
ities as following and results are assessed after 21
days of treatment.

Preparation of Patients

Shatasakara Churna or Triphala Churna 3-6 gms HS
for 3-5 days in normotensive and hypertensive pa-
tients, respectively before starting the therapy.

Samsodhana Chikitsa

1. Abhyanga (massage) on the suprapubic and
lumbosacral region with Narayana taila for 15-
20 minutes daily before giving vasti.
2. Nadi-Sweda (Steam fomentation) following Ab-
hyanga on the same region with the stream of
Dashmoola kwatha for 10-15 minutes before
application of vasti.
3. Vasti (Retention Enema)
   - Anuvasana Vasti : Narayana taila (50 ml) on al-
ternate days.
   - Niruha Vasti : Narayana taila (20 ml) + Dash-
moola Kwatha (150 ml) on alternate days.

Samshamana Chikitsa

1. Varuna Kwatha : 50 ml, twice daily orally.
2. Sudha Kupeelu - 125 mg with honey followed by
   a cup of milk twice daily orally to normotensive
   patients.

Follow-up

All patients were asked to attend the hospital at
monthly intervals initially and then at an interval of
three months. Clinical examinations and laboratory
investigations were performed during the follow-up
period. During the follow-up period, patients were
given Varuna-Kwatha 50 ml twice a day. Follow-
up assessment of patients was done from six months
to two years and an even more.

RESULTS AND DISCUSSION

To start with blood urea and serum creatinine level
was normal in 53% and 87% cases, respectively.
The per cent of patients having a normal level of urea
and creatinine was increased to 76% and 93% after
treatment, respectively. Similarity after treatment,
the number of patients having albumin, pus cells,
RBC crystals and epithelial cells were decreased. Be-
fore treatment, the bacteria was observed in 44% of
patients, and after the treatment, the number of pa-
tients with bacteria was decreased to 7% only.

Ultrasonographic study

Changes in Weight of Prostate: The size of the
prostate was determined, and weight was calcu-
lated. Comparative study of before treatment and
after treatment value of prostatic weight revealed a
reduction in size (weight) of the prostate after the
therapy). The reduction in weight of the prostate
was not uniform. In a few cases, an increase in
weight was also observed. For the convenience of
analysis, the changes in weight were assessed in
three categories viz. significant reduction, insigni-
ficant reduction and increase in weight. After therapy,
when the reduction in weight was more than 10 gms
it was termed as Significant Reduction and when the
reduction in weight was less than 10 gms, it was con-
sidered as Insignificant Reduction while increase in
the weight of prostate irrespective of degree of ad-
vancement in weight, in few cases, were regarded as
Increase in weight.

The number of patients having a significant, insignifi-
cant reduction and increase in weight varied from
grade to grade (Table 1). After treatment, out of 75
patients, 70.67% of patients showed a significant re-
duction in weight of the prostate and in 12% pa-
tients there was an insignificant reduction of weight
while in 17.33% patients weight was increased.

The differences between mean weight of prostate,
before and after the treatment, were calculated in
each category of each grade and then mean per-
centage of the significant reduction, insignificant re-
duction and increase in weight were calculated. In-
significant weight reduction category (>10 gm) the
Table 1: Number of cases having Significant Reduction (>10gm) Insignificant Reduction (> 10gm) and increased in Weight after therapy

| Grade   | Total No. of Patients No. of Cases (%) | Significant Reduction No. of Cases (%) | Insignificant Reduction No. of Cases (%) | Re- Increase in weight No. of Cases (%) |
|---------|----------------------------------------|---------------------------------------|------------------------------------------|----------------------------------------|
| Grade I | 28(37.33)                              | 19(67.85)                             | 3(10.71)                                 | 6(11.42)                               |
| Grade II| 36(48.00)                              | 27(75.00)                             | 6(16.66)                                 | 3(08.33)                               |
| Grade III| 09(12.00)                             | 7(77.77)                              | -                                        | 2(22.22)                               |
| Grade IV| 02(02.66)                              | -                                     | -                                        | 2(100.00)                              |
| Total   | 75(100)                                | 53(70.67)                             | 9(12)                                    | 13(17.33)                              |

mean percentage of reduction was maximum in 75% cases of grade II and was slightly higher than grade I (68.0%) and grade II (67%) (Table 2).

Changes in Residual Urine: The residual urine volume before after the treatment was estimated by ultrasonography. Before the treatment 8 (11%) patients were incapable of voiding the urine, the residual urine could not be estimated in these patients. Whereas, in (15%) patients, the residual urine, before and after the treatment was negligible. Thus, these patients were not included in the comparative study of residual urine. Effect of therapy on residual urine was variable in 46 (82%) patients, out of 56 of the residual urine was decreased while in 10 (18%) patients it was found also increased (Table 3).

After taking the difference between mean residual urine before and after the treatment, the mean percentage of changes in residual urine in each grade was calculated (Table 4). The maximum mean percentage of decrease was observed in 24 patients of grade II.

Objectively, results are assessed in terms of reduction in prostate weight (>10 gm) only were regarded as Relieved while the patients having insignificant weight reduction and increase in weight were considered as Not Relieved while the patients having in significant weight reduction and increase in weight were considered as Not Relieved. Thus, the total number of relieved patients, out of 75 (100%) was 53 (69.33 %), and the non-relieved patients were 23 (30.66%). (Table 5)

In Ayurvedic system of medicine, Vasti Karma (retention enema) is the best and first line of treatment for Vatika disorders. Although the vasti medicaments may come out after some time of administration but its active components gests absorbed and distributed in the body through Srotas (Channels) with the help of apana, udana and vyana vyayu in the same manner like the water sprinkled at the root of the tree reaches to all parts. So, per rectal administration, the medicaments are absorbed in the villi of the rectal mucosa and then through the external and internal hemorrhoidal vessels come into the systemic circulation.

Now it is well-established the fact that growth of the prostate gland is under the control of serum testosterone concentration (androgenic stimulation) (Thorpe and Neal, 2003) Moreover, reduction in prostatic size along with the regression of prostatic epithelium has been reported after the treatment and Naferlin acetate, a LHRH against androgen deprivation. (Mcvary, 2011) So, it is possible that after administration of vasti (medicaments), the active components of vasti are absorbed and come into the systemic circulation and may have anti-androgenic activity so that no persistent androgenic stimulation is available to the prostate for its growth and consequently the prostate is regressed as evident from our observation of reduction in the size of prostate. (Oelke et al., 2013)

The decrease in residual urine might be due to decrease in prostatic obstruction, but it is now established that the high residual urine volume is not caused by enlarged prostate itself, rather it is a sign of abnormality of bladder function. This view is consistent with that of Turner-Warwic et al. that residual urine is a sign of bladder failure, secondary to outlet obstruction leading to compensatory hypertrophy of detrusor muscle fibers of urinary bladder. (Cindolo et al., 2014)

The decrease in residual urine volume by this unique ayurvedic therapy suggest revitalization of neuromuscular control of the urinary bladder. (Kumar, 1981) Probably, the application of vasti acts on urinary bladder wall and initiates the stretch reflex resulting in the contraction of hypertrophied muscle. On the other hand, the active components of medicaments are absorbed through rectal mucosa and might stimulate the sacral parasympathetic nerve endings to release more acetylcholine; by which sphincters get relaxed and smooth muscle of bladder contract with increased muscular tone and...
Table 2: Percentage of Significant Reduction in Weight (>10gm) in each grade

| Grade | No. of Cases | Mean wt. in gms (B.T.) | Mean wt. in gms (A.T.) | Reduction wt. in gms (B.T.-A.T.) | Mean % of reduction |
|-------|--------------|------------------------|------------------------|----------------------------------|---------------------|
| Grade I | 19(67.85) | 27.37 | 15.78 | 11.59 | 42.34 |
| Grade II | 27(75.00) | 42.78 | 23.08 | 19.70 | 46.04 |
| Grade III | 07(77.77) | 65.13 | 43.13 | 22.99 | 35.30 |
| Grade IV | - | - | - | - | - |

Table 3: Number of cases having Decreased and Increased Residual urine after therapy

| Grade | No. of Patients (%) | Decreased Residual Urine No. of Cases (%) | Increased Residual Urine No. of Cases (%) |
|-------|---------------------|------------------------------------------|------------------------------------------|
| Grade I | 19(33.92) | 15(78.92) | 4(21.05) |
| Grade II | 28(50.00) | 24(85.71) | 4(14.28) |
| Grade III | 7(12.50) | 6(85.71) | 1(14.28) |
| Grade IV | 2(3.57) | 1(50.00) | 1(50.00) |
| Total | 56(100.00) | 46 (82.14) | 10(17.85) |

Table 4: Percentage of Decrease in Residual Urine after the therapy in each grade

| Grade | No. of Cases | Mean residual urine (in ml) B.T. | Mean residual urine (in ml) A.T. | Decrease in residual urine (in ml) B.T. | Mean % of decreased residual urine |
|-------|--------------|----------------------------------|----------------------------------|----------------------------------------|----------------------------------|
| Grade I | 15(78.94) | 120.78 | 60.32 | 60.46 | 50.05 |
| Grade II | 24(85.71) | 230.19 | 73.24 | 156.95 | 68.18 |
| Grade III | 06(85.71) | 241.24 | 117.13 | 124.11 | 51.44 |
| Grade IV | 01(50.00) | 599.00 | 499.00 | 99.40 | 16.59 |

Table 5: Number of Relieved and Not-relieved patients after treatment in each grade

| Grade | Total No. of Cases (%) | No. of Relieved patients (%) | No. of Non-Relieved Patients (%) |
|-------|------------------------|-------------------------------|----------------------------------|
| Grade I | 28 (37.33) | 19 (67.85) | 9 (32.14) |
| Grade II | 36 (48.00) | 27(75.00) | 9 (25.00) |
| Grade III | 09 (12.00) | 07 (77.77) | 2 (22.22) |
| Grade IV | 02 (02.66) | - | 2 (100.00) |
| Total | 75 (100.00) | 53 (70.67) | 22 (29.23) |

thus the amount of residual urine is reduced significantly. (Gyaneshwar, 1991)

Besides the above, the oral medication used in this therapy also produces their effects on smooth muscle contraction. Kumar P et al. reported that Varuna is efficacious in neuro-muscular hypotonic and atonic conditions of the urinary bladder. Another drug, Shuddha kupilu churna is also a well-known convulsant in day-to-day practice and in therapeutic does it is used to improve the tonicity of smooth muscles including that of urinary bladder. (Kumar, 1981; Gupta, 1993)

With the above consideration, it can be inferred that the employed non-surgical ayurvedic therapy-Vasti Karma is effective in the management of BPH as proved by a reduction in prostate size as well as a decrease in residual urine along with clinical improvement. Further scientific evaluations on this therapy are required to be carried out. (Singh, 1997; Bhatt, 2003)

CONCLUSIONS

Basti therapy is useful in BPH with significant results, especially lateral lobe enlargement is more re-
responsive without any adverse effect. This therapy needs to be evaluated on more recent parameters and on large sample size. Recently our department is the continuing effect of this treatment procedure on newer parameters like trans rectal ultrasonography, evaluation of hormones related to BPH and histology.

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