

**BENIGN PROSTATIC HYPERPLASIA (BPH) AND ITS UNANI MANAGEMENT - A
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ABSTRACT

Benign prostatic hypertrophy (B.P.H) is a common condition in men above 50 years of age & is characterized by a nonmalignant enlargement of the prostate resulting from excessive cellular growth of both the glandular and the stromal elements of the gland. The clinical feature of B.P.H. includes incomplete emptying, frequency, intermittency, weak stream, straining & nocturia. Modern treatment though effective in treating symptoms has a number of side effects such as Sexual dysfunction, Postural hypotension, Asthenia, Dizziness, etc. Similarly, surgical procedures such as prostatectomy, laser treatment & transurethral resection of the prostate (TURP) are costly & associated with a high risk of complications and morbidity. Hence, there is a definite need to explore and evaluate the efficacy of Unani medicines in the management of B.P.H.

KEYWORDS- Case Report: Benign Prostatic Hyperplasia (BPH), Lower urinary tract symptoms (LUTS), α 1 blocker- Tamsulosin hydrochloride, Micturition; Unani Medicine.

INTRODUCTION

Benign Prostatic Hyperplasia (B.P.H) is defined as a non-malignant growth of the prostate observed very commonly in aging men. And histologically hyperplasia of both epithelial and stromal cells, beginning in the periurethral area of the prostate gland.^[1,2,3] It is not life-threatening, but its clinical manifestation are lower urinary tract symptoms, (LUTS) which reduce the patient's quality of life (QOL)^[4] with hallmark symptoms of prostatic enlargement associated with painful urination, urinary frequency, nocturia, hesitancy, urgency, weak stream, straining, dribbling and incomplete emptying.^[5,6] The etiology of BPH is still unknown, one hypothesis infers that the prostate converts testosterone to a more powerful androgen, Dihydrotestosterone (DHT) which stimulates cell growth in the tissue that lines the prostate gland (the glandular epithelium), and is the major cause of the rapid prostate enlargement.^[7] Remedial relief, several drugs are available for BPH, long-term therapy so as to maintain the benefits of these medications, along with side effects; the most commonly reported side effects are headache, dizziness, postural hypotension, asthenia, drowsiness, nasal congestion, and retrograde ejaculation.^[2,4] In unani medicine any such growth which may be directly or

indirectly referred to as benign prostatic hyperplasia, has not been mentioned as such however, many unani resource books describe vividly various causes, conditions, and pathophysiology which collectively and indirectly may be correlated.^[8] Greco-Arabic scholars were well aware of the etiology of *Ihtbas-e-bawl* (Retention of urine), *Usrul bawl* (Dysuria), *Taqteer-ul-bawl* (Dribbling of urine), *Salisul bawl* (Incontinence of urine) and etc.^[9,10,11] Ismail Jurjani in his treatise "*Zakheera Kharzam Shahi*" describes that causes of Dysuria, Dribbling of urine, Incontinence of urine or burning micturition may be Excessive growth in the urinary tract, *sudda*, abnormal cold temperament (*sue mizaj barid Maddi*), weakness in the bladder muscles (*zoafe azlate masana*), alcohol, diuretics, and excessive fluid intake, dislocation of vertebrae or injury to bladder musculature, disease of surrounded structure such as uterine inflammation or omphalitis or constipation, and pregnancy.^[12]

Prostatomegaly can be correlated as as *Izam-i-Ghudda-i Mazi Sada*, *Sala`a Ghudda-e-Mazi*, *Warm-e-Ghudda-e-Mazi*, and *Warm-e-Unq-e-Masanah*.^[13,14,15] It is a condition resembling the clinical feature discussed under *Usr-ul-Bawl* (Dysuria), *Ihtibas-ul-Bawl* (Retention of

Urine), and *Taqtir-ul-Bawl (Dribbling of Urine)*, narrow stream, urgency, incontinence, etc. in classical literature of USM. Unani Physicians have mentioned that *Warm-i-Aza-i-Mujawira* (Inflammation/swelling of neighboring organs) of the urethra may compress it causing obstruction to the flow of urine.^[16,17] These conditions may be correlated to Benign Prostatic Hyperplasia (BPH), where an enlarged prostate compresses the prostatic urethra and produces symptoms such as hesitancy, intermittent voiding, diminished stream, incomplete emptying, and post-void leakage. It is caused by the abnormal accumulation of *Balgham Ghaliz or Mawad-e-Ghaliz* (thick phlegm) which has been mentioned as the leading cause of Swelling, inflammation (Auram), of any *Azw Ghudadi* (Gland) of the body.^[18] It is characterized by urinary frequency, hesitancy, strangury, and urgency with the weak urinary stream. The patient may have feelings of incomplete bladder emptying, straining, and terminal dribbling. Acute and chronic urinary retention may also be present. Unani physicians are treating the symptoms of BPH for centuries with safe Unani herbal remedies.

MATERIAL AND METHODS

Case Presentation

A 62-years-old, 70-kg male was presented in the OPD (OPD NO. 567271/760802), Department of *Moalajat* (Medicine) National Institute of Unani P.G. Medical College and Hospital, Bengaluru Karnataka, on 28/11/2022. He was experiencing increased frequency of urine and difficulty in micturition, Urgency, hesitancy, post voided Dribbling and nocturia in the last 1 year.

History of Present Illness

The patient states that he was quite well 1 year back. Since then, he experienced an increased frequency of urine and difficulty in micturition associated with urgency and hesitancy. The patient also complained post voided dribbling and nocturia. The patient underwent treatment from many doctors but could not get complete relief. Now patient approached us for further management.

Past History of the Patient

There was no relevant history. No history of diabetes, Hypertension. He was a non-smoker and used to work in an environment with no known exposures to chemicals, fumes, dust, and other environmental or occupational allergens. He had no known history of allergy to any drug. His family history revealed that there was no such complaint ever.

General Examination

The vital signs showed blood pressure (BP) of 126/82 mmHg, Temperature of 98.0 F, and Pulse rate of 74 beats/minute. Laboratory tests including Complete blood count (CBC), Urine tests routine and microscopic were normal. On the systemic examination, no abnormality was detected in the gastrointestinal, respiratory, cardiovascular, or nervous systems.

It was a known case of prostatomegaly as the patient was already under treatment by an allopathic doctor with a USG report showing the size of the prostate 36. cc with post-voided residual urinary volume 170 cc. Other investigations such as Prostate Specific Antigen (PSA) level and rectal examination (R/E) were normal. After 1 month of treatment, as there was no symptomatic improvement, the patient was advised for surgery. With significant morbidity and fear of surgical intervention, the patient did not undergo surgery and came to us for Unani treatment.

The patient was stable, well-dressed, very mild, and gentle in talking, and does not to be alone. He likes to do things in a perfectly orderly manner, is sympathetic toward the suffering of others, and loves to travel. His appetite is good and has a desire for salt and spicy food with moderate thirst and a clean, moist tongue. Urine is mildly offensive, unsatisfactory, unfinished sensation, passes 9–12 times a day of moderate quantity with more urgency felt in the evening. Bowel movement is regular with scanty, no offensive sweat over the face and palms. Sleep is sound, Patient is extremely chilly and prefers rainy, wet weather, and aggravation in winter.

Criteria for Assessment

(1) **Subjective parameters:** The symptoms of BPH were recorded on the basis of the international prostate symptom score (IPSS). Grading on the basis of a total score of IPSS (maximum score 35).^[1,5]

Symptom score

<7 -Mild
7-19 -Moderate
>19 -Severe

2. Objective Parameter

(A) **USG for weight, volume, size, and residual urine assessment.**

(B) **Maximum Flow Rate is the objective parameter.**^[1,5]

Grading –
>15 ml/s -G0
13-15ml/s -G1
10-12ml/s -G2
7-9ml/s -G3
<7ml/s -G4

Parameters of assessment

The progress of the therapeutic regimen was assessed on subjective and objective parameters. International prostate symptoms score was taken for subjective assessment and Maximum Flow Rate and USG were objective parameters.

Study Design

On the basis of symptoms, *Majoon-e-Rasheedi* was used as a drug for the present case. The dose was decided as 7-gram O.D. for 45 days.

RESULTS

The subjective assessment was done on the basis of the international prostate symptom score (IPSS). During treatment, the patient did not develop any other

complaints. He reported gradual improvement in all symptoms. After treatment, the patient got significant relief from the symptoms.

Table 1: Progress of patient every 15 days interval (IPSS).

Symptom	BT	F1	F2	F3
Incomplete Emptying	4	3	1	0
Frequency	5	3	2	1
Intermittency	3	3	2	1
Urgency	3	2	1	1
Weak stream	0	0	0	0
Straining	0	0	0	0
Nocturia	4	2	1	0
Total	19	13	7	3

The objective assessment was done on the basis of USG, post-voided residual volume, and Uroflowmetry (Maximum Flow Rate).

(A). USG and post-voided residual volume

Table 2: Improvement in USG findings.

Measurements	BT	AT
Size (in cc)	36.0 cc	26.0 cc
Pre Void-Urine Volume (in ml)	197.0 cc	60.0 cc
Post Void Urine Volume (in ml)	170.0 cc	25.0 cc

(B). Maximum Flow Rate

Table 3: Progress of patient Before treatment and after treatment.

Duration	BT	AT
Grading	13 (Grad 1)	15 (Grad 0)

Table 4: Investigations of the patient before and after Treatment.

Investigations	AT	BT
Hb	12.2 gm/dl	12.9 gm/dl
ESR	23 mm/hr.	07 mm/hr.
TLC	8200 cu/mm	4300 cu/mm
RBS	103 mg/dl	112 mg/dl
SGOT	24 U/L	18 U/L
SGPT	27 U/L	17 U/L
Alkaline phosphatase	83 U/L	80 U/L
Blood urea	19 mg/dl	13 mg/dl
Serum creatinine	0.8 mg/dl	0.8 mg/dl

DISCUSSION

Different types of mechanisms of action subside the symptoms like *Izam-i-Ghudda-i Mazi* (BPH). The *Majoon -e-Rasheedi* consisted of *Piper cubeba* (*Kabaabchini*), *Areca catechu* Linn. (*Fufal*), *Eugenia coryophyllata* (*Qaranful*), *Pistacia lentiscus* Linn. (*Mastagi*), *Myristica fragrance* Houtt (*Jauzbuwaa*), *Trachyspermum Ammi* (*Nankhwaah*) and *Orchis latifolia* Linn. (*Salab misri*).

Piper cubeba (*Kabaabchini*) possesses anti-inflammatory, *Piper cubeba* fruit extract shows a potent testosterone 5 alpha-reductase inhibitory activity which was first identified by Hirata.^[19] smooth muscle

relaxation, and diuretic actions, which are useful in genitourinary infections, painful micturition, hematuria, dysuria, and benign prostatic hyperplasia. The diuretic activity of *Piper cubeba* (*Kabaabchini*) helps relieve associated subclinical urinary insufficiency and also helps to reduce post-void urine.^[20]

Areca Catechu Linn. (*Fufal*), possess 5- α -reductase inhibition with α -adrenergic blocking activity. 5 α -reductase inhibition blocks the conversion of testosterone to dihydrotestosterone, the major sex hormone in the prostatic cells responsible for BPH.^[21] *Areca catechu* L. was prepared and its various biological activities were evaluated. CC-516 showed potent anti-oxidative, free

radical scavenging, and anti-hyaluronidase activity.^[22] Alcoholic extract of *Areca catechu* showed antifertility activity at 300 and 600 mg/kg body weight doses.^[23]

Trachyspermum Ammi (Nankhwaah) Ajwain was attributed to have diuretic and anti-lithiasis activity in ethnopharmacological reports.^[24] *Ajwain* was also evaluated for exhibiting anti-inflammatory effect. Accordingly, both total alcoholic extract and total aqueous extract possess *in vivo* significant anti-inflammatory effects.^[25]

Myristica fragrance Houtt (Jauzbuwaa), was attributed to having diuretic, Retentive of semen, aphrodisiac, analgesic, and an anti-inflammatory effect Ahmed et al. conducted a study on male rat models to evaluate the activity of *Myristica fragrans Houtt. (nutmeg)* on sexual behavior. It was observed that 50% ethanolic extract of the plant exhibited aphrodisiac activity.^[26]

A study evaluated used the CFA-injected rats as a sustainable pain model to test the anti-inflammatory and analgesic effect of nutmeg oil. The result showed to be a potential chronic pain reliever through inhibition of COX-2 expression and blood substance P level.^[27]

Orchis latifolia Linn. (Salab misri) is Tonic and Expectorant Aphrodisiac, Nervine Tonic, Nutritive Astringent, Refrigerant, Diuretic, Anthelmintic, Antidiarrhoeal.^[28]

The plant's aphrodisiac nature was studied by observing mounting behavior, hormone levels, and semen parameters in male mice. Crude extract showed a significant increase in mounting behavior, and a remarkable increase in organ weights, sperm counts, protein, hemoglobin, and testosterone content as compared to the control group.^[29]

Orchis latifolia as one of its ingredients, exhibited calcium channel blocking (CCB) activity by inhibiting high K⁺ - induced contractions and the rightward shift of Ca⁺⁺ concentration-response curves similar to verapamil in isolated smooth muscle preparation.^[30]

Pistacia lentiscus Linn. (Mastagi) *Pistacia lentiscus* L. leaves and fruits, expanding the search for the scientific discovery of their chemistry, Diuretic, Astringent, Stimulant, Carminative, resolvent, wound healing anti-inflammatory, antioxidative, and antimicrobial activities.^[31]

Anti-inflammatory activity has been the focus of many recent investigations Dellai et al. (2013).^[32]

The pharmacological evaluation of the *P. lentiscus* leaf extracts showed the anti-inflammatory potential of this plant and that its activity is unlike non-steroidal anti-inflammatory drugs and corticosteroids. The extracts did not cause damage to the stomach mucosa but showed

inhibition of lesion formation. Bouriche et al. (2016) carried out the work.^[33]

In another *in vitro* study *P. lentiscus* L. extracts were tested on bacteria (*Sarcina lutea*, *Staphylococcus aureus*, and *Escherichia coli*) and fungi (*Candida albicans*, *Candida parapsilosis*, *Torulopsis glabrata*, and *Cryptococcus neoformans*). Plant extractions and decoctions showed the best antibacterial activity, but the activity against fungal cells appears to be much more interesting.^[34]

Antibacterial activity of mastic gum, a resin obtained from the *P. lentiscus* tree, against clinical isolates of *Helicobacter pylori*. The minimal bactericidal concentrations (MBCs) were obtained by a microdilution assay. Mastic gum killed 50% of the strains tested at a concentration of 125 mg/ml and 90% at a concentration of 500 mg/ml. The influence of sub-MBCs of mastic gum on the morphologies of *H. Pylori* was evaluated by transmission electron microscopy. The *lentiscus* resin induced blebbing, morphological abnormalities, and cellular fragmentation in *H. pylori* cells.^[35]

Eugenia coryophyllata (Qaranful) the plant *Syzygium aromaticum* and its oil content such as antibacterial, antifungal, antioxidant, antistress activity, anti-inflammatory, anticancerous, antiviral, analgesics activity, dental care activity, Mosquito repellent, insecticidal activities and Neuroprotective activity (Wenkhe, 2015; Kessab and Bajjom, 2014; Kumar et al, 2011).

Clove is also reported as aphrodisiac, stomachic, carminative, and antispasmodic. It is reported to be useful in conceiving in high doses and acting as a contraceptive in low doses 6 and is useful in cataracts. Clove is also reported to have anticarcinogenic properties. It inhibits platelet aggregation and alters arachidonic acid metabolism in human platelets. It possesses antiviral activity against Herpes simplex.^[36]

Antioxidant activity is the property to reduces free radicles (Alfkri et al. 2020). Clove is considered the best antioxidant found in nature because it contains high levels of phenolic compounds and other bioactive compounds. The antioxidative activity is measured by the oxygen radical absorption capacity (ORAC), a standard test developed by the USDA for the antioxidant activity comparison (Milind and Deepa 2011).

The clove and its phytochemicals have anti-inflammatory effects. Clove oil is known for clearing the respiratory passage by removing the respiratory mucus, thus used to treat colds, bronchitis, cough, and asthma (Mittal et al. 2014). Clove showed its anti-inflammatory action by suppressing the lipopolysaccharides. Clove oil rich in eugenol showed anti-inflammatory efficacy against murine macrophages by suppressing the pro-inflammatory cytokines (Rodrigues et al. 2009; Bachiega

et al. 2012) like interleukin-8 against human gingival fibroblasts. Eugenol exerts its anti-inflammatory effects by impeding neutrophil chemotaxis and preventing the cyclooxygenase II enzyme expression and prostaglandin synthesis (Nejad et al. 2017)

Clove and its derivatives are reported as natural antimicrobial agents. The clove has antibacterial activity against many gram-positive and gram-negative bacteria. This antibacterial activity is due to the phytochemicals in the clove (Mittal et al. 2014). The clove showed the best results against the foodborne gram-positive bacteria like *S. aureus*, *B. cereus*, *E. faecalis*, *L. monocytogenes*, and gram-negative bacteria like non-toxicogenic strains of the *E. coli* (Burst and Reinders 2003), *Y. enterocolitica*, *S. choleraesuis*, *P. auregenosa*, and *S. typhimurium* (Hu et al. 2018; Mittal et al. 2014).

The clove extract, containing different bioactive compounds exhibited antiviral activity against many viruses, especially the herpes simplex virus (Batiha et al. 2020).

The CEO and its main bioactive compound, eugenol, are useful as an antifungal agent. Phytochemicals in the CEO are most active against the *Candida*, *Aspergillus*, and dermatophyte species and showed antifungal activity against clinically essential fungi like fluconazole-resistant strains (Milind and Deepa 2011).

All these drugs have Many properties helped the patient to overcome the remnant of urinary troubles. Once again proving the effectiveness of Unani medications in BPH. This case also shows the significance of individualization in the Unani system of medicine. Since the Unani medical philosophy views "man as a whole," this patient's subjective condition also improved, and the size of his prostate significantly shrank. In situations where a complete surgical intervention is not required, Unani medicine may be helpful. So, the goal of Unani treatment is to address the underlying etiology, miasmatic background, individual susceptibility, etc. of BPH or other problems in addition to treating the symptoms themselves. Even if a single case report cannot be used to form a firm judgment, the results are positive.

CONCLUSION

So, at the end of the study, it is assumed that *The Majoon-e-Rasheedi* is quite effective in managing the symptoms like *Izam-i-Ghudda-i Mazi* (BPH).

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Informed Consent

Written consent was obtained from the patient for the purpose of publication of their clinical details. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of Interest

None declared.

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