Benign prostatic hyperplasia (BPH) is a common male genitourinary system disease in clinical practice and one of the diseases with the highest incidence in elderly men. It refers to the histological hyperplasia of prostate interstitial and gland components in middle-aged and elderly men (over 50 years old) and the anatomical enlargement of the prostate (benign prostatic enlargement), characterized by bladder outlet obstruction (BOO) and clinically significant lower urinary tract symptoms, severely affecting the quality of life of middle-aged and elderly men. Symptoms of BPH include sudden urination due to incomplete bladder emptying, straining during urination, dribbling due to weakened urine flow, pain during urination, and bloody urine. If the capsule around the prostate prevents its radial expansion, it may cause urethral compression, leading to difficulty in urination. Prostate tissue damage and chronic tissue healing are considered direct or indirect causes of BPH nodules.

Difficulty in urination is classified under “Longbi (difficulty in urination),” “Jinglong (hypertrophy of prostate),” and “Lin Zheng (Stranguria)” in traditional Chinese medicine (TCM). Western medicine treatment mainly involves the combined use of α-receptor blockers, 5α-reductase inhibitors, and surgical treatment; however, there are limitations such as poor efficacy and many adverse reactions. When TCM treats BPH, it starts from whole physical conditions of the current patient. According to syndrome differentiation, it can provide different prescription so TCM has advantages in treating this disease with good therapeutic effects and few adverse reactions.

Classical prescriptions have the advantages of exquisite medical compatibility and definite therapeutic effects. Treatise on Cold Damage and Miscellaneous diseases (Shang Han Za Bing Lun) mentions “difficulty in urination” in many places, providing a complete theoretical understanding of the
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disease and offering therapeutic prescriptions, which modern research has confirmed to have good therapeutic effects on BPH. This article reviews the research progress on the treatment of BPH with classical prescriptions by analyzing classical prescriptions and combining recent clinical and experimental research.

Understanding of Benign Prostatic Hyperplasia in Traditional Chinese Medicine

BPH has the symptoms of difficulty in urination, frequent urination, urgent urination, and increased nocturia. According to its morphological changes, it can be classified under “Zhengjia” and “Jiju” (lump and accumulation) in TCM. Yellow Emperor’s Inner Classic (Huang Di Nei Jing) records that “Bladder dysfunction leads to Long ((hyper trophy of prostate))”, and lack of control leads to urinary incontinence.” This is similar to the symptoms of BPH during the compensatory period of bladder function, such as difficulty in urination and uncontrollable dripping and dribbling of urine.

Due to the symptoms of difficulty in urination, frequent urination, and urgent urination, BPH belongs to “Longbi (difficulty in urination)” and “Jinglong (hypertrophy of prostate)” in TCM. However, the age group of BPH patients is relatively old, and kidney qi is relatively insufficient. Therefore, the root cause is the deficiency of kidney qi, which leads to sluggish movement of qi and blood, turbid phlegm, impaired essence and blood stasis obstructing the prostate, causing hypertrophy. Therefore, it can also be classified under “Zhengjia” and “Jiju” (lump and accumulation) in TCM. Zhang Jiebin of the Ming Dynasty said in Complete Works of Jingyue (Jing Yue Quan Shu): “Impaired essence or blood stasis blocks the waterway and causes obstruction”. It can be seen that the root cause of BPH is the decline of kidney qi, and the local turbid fluid and blood stasis of the prostate are the signs, and the urinary symptoms are manifestations.

Pathogenesis of Benign Prostatic Hyperplasia

Synopsis of the Golden Chamber (Jin Gui Yao Lüe) states “Heat in the lower energizer causes hematuria and also leads to difficulty in urination.” The symptoms mentioned in the text are similar to the symptoms of BPH. According to the Treatise on Cold Damage and Miscellaneous Diseases (Shang Han Za Bing Lun), its pathogenesis can be summarized as deficiency of healthy qi, blood stasis, and internal fluid retention, that is, in elderly men, kidney qi gradually becomes insufficient, and tangible substances such as turbid phlegm, fluid retention, and blood stasis gradually arise, obstructing the bladder in the lower energizer and affecting the bladder’s qi transformation function, thus leading to this disease.

Treatment with Classical Prescriptions

Deficiency of Healthy Qi

Deficiency of healthy qi leads to a decrease in the body’s ability to regulate the functions of organs, meridians, and collaterals, which easily leads to disorders of organ functions, abnormal metabolism of qi, blood, and body fluids; or pathological products accumulate and cause new lesions due to abnormal metabolic capacity. Shao et al pointed out that age is closely related to BPH. In elderly men, kidney qi gradually becomes deficient, qi, blood, and body fluids lose the drive of healthy qi, manifesting symptoms such as soreness and weakness of the waist and knees and difficulty in urination. Jingui Shenqi Pill is used to tonify the kidney and assist yang and supplement kidney qi. If the kidney yang has been weak for a long time and cannot warm the spleen yang, weak spleen cannot transport and transform water and fluids, causing difficulty in urination and abdominal pain, then Zhenwu Decoction and Fuzi Decoction are used to warm yang and promote diuresis.

Jingui Shenqi Pill

Jingui Shenqi Pill consists of dry Dihuang (Rehmanniae Radix), Shanyao (Dioscoreae Rhizoma), Shanzhu (Corni Fructus), Zexie (Alismatis Rhizoma), Zhi (Moutan Cortex), Guizhi (Cinnamomi Ramulus), Fu (Acon Lateralis Radix Praepapaia), representing the formula for tonifying the kidney and assisting yang and generating kidney qi. Among them, Dihuang (Rehmanniae Radix), Shanyao (Dioscoreae Rhizoma), and Shanzhu (Corni Fructus) can tonify the kidney and replenish essence, thereby benefiting kidney qi. A small amount of Guizhi (Cinnamomi Ramulus) and Fu (Acon Lateralis Radix Praepapaia) are combined with tonifying herbs, reinforcing yang from yin and generating kidney qi. Danpi (Moutan Cortex), Fuling (Poria), and Zexie (Alismatis Rhizoma) can promote water metabolism through the water pathways. The combination of these herbs achieves the effect of warming and tonifying kidney yang, transforming qi, and promoting urination, which is suitable for the treatment of BPH due to healthy qi deficiency.

Shiwei Qi believes that the decline of kidney qi is the root cause of BPH, and BPH is essentially due to the deficiency of kidney essence and kidney qi, so Jingui Shenqi Pill should be used for treatment. Shou divided 228 BPH patients into a treatment group and a control group. The treatment group was treated with supplemented Jingui Shenqi Pill, and the control group was treated with Qianliekang tablets. After 30 days of treatment, the results showed that in the treatment group, 68 cases were significantly effective, 42 cases were effective, and 12 cases were ineffective, with a total effective rate of 90.2%; in the control group, 44 cases were significantly effective, 36 cases were effective, and 26 cases were ineffective, with a total effective rate of 75.2%. The difference between the two groups was significant (p < 0.05). Xu et al conducted a clinical study on BPH patients with yang-deficiency constitution. Sixty patients received conventional Western medical treatment, and the observation group was additionally treated with Jingui Shenqi Pill. The results showed that the total effective rate of the observation group was significantly higher than that of the control group, effectiely reducing the IPSS score, residual urine volume, and prostate volume, and improving the maximum urinary
flow rate. Zhang et al.\(^24\) found that the action mechanism of Jingui Shenqi Pill in treating rat prostate hyperplasia may be related to regulating serum sex hormone levels and improving the estrogen-to-testosterone ratio. The medium-dose group of Jingui Shenqi Pill significantly increased the levels of serum E2 and E2/T, reduced the prostate index, prostate wet weight, and serum T levels in BPH rats, and significantly improved histopathological changes in prostate hyperplasia. Shao et al.\(^25\) found that the potential mechanism of Jingui Shenqi Pill in treating BPH may involve β-sitosterol acting on the JUN target.

**Zhenwu Decoction**

Zhenwu Decoction consists of Fuling (Poria), Baizhu (Atractyloides Macrocephalae Rhizoma), Fuzi (Aconitum Lateralis Radix Praepapaia), Shaoyao (Paeoniae Alba Radix), and Shengjiang (Zingiberis Rhizoma Recens), mainly treating abdominal pain, difficulty in urination, and heaviness and pain in the limbs. Among them, Fuzi (Aconitum Lateralis Radix Praepapaia) is pungent and hot in nature and has functions to invigorate the body’s yang qi; Fuling (Poria) and Baizhu (Atractyloides Macrocephalae Rhizoma) can strengthen the spleen yang, and the combination of the three herbs restores qi transformation; Shengjiang (Zingiberis Rhizoma Recens) warms and transforms fluid retention. Shaoyao (Paeoniae Alba Radix) can soothe the local fascia and muscles of the prostate. The combination of these herbs warms yang, promotes urination, relieves urgency, and alleviates pain, targeting the pathogenesis of BPH with kidney yang deficiency and blood stasis and fluid retention.

Modern pharmacological studies have shown that this formula has effects on hemodynamics, regulating neuroendocrine function, aquaporin and plasma osmotic pressure, and balancing water metabolism.\(^26\) Liu used Zhenwu Decoction combined with Shenzhuo Decoction to treat 30 patients with BPH due to kidney qi deficiency, resulting in 25 cured cases, 3 improved cases, and 2 ineffective cases, with a total effective rate of 93.3%.\(^27\) Yao et al.\(^28\) used Zhenwu Decoction to treat 59 cases of BPH with acute urine retention, achieving an effective rate of 94.9%. Yang and Chen\(^29\) observed the clinical effect of Zhenwu Decoction on lower urinary tract symptoms of BPH due to spleen and kidney yang deficiency, using Tamsulosin Hydrochloride Sustained Release Tablets as a control. The treatment group received Zhenwu Decoction additionally. The results showed that the improvement of quality of life, the maximum urine flow rate, residual urine volume, and international prostate symptoms score 1 (IPSS1) indicators in the treatment group was better than that in the control group \((p < 0.01 \text{ or } p < 0.05)\).

**Blood Stasis**

Blood stasis is one of the most important causes and pathological products of BPH.\(^30–34\) Blood stasis accumulates in the lower energizer, obstructing the water pathways and causing difficulty in urination. The pathological changes of BPH include the proliferation of inner urethral gland epithelial cells and urethral gland epithelial cells, glandular cystic dilation, connective tissue, and smooth muscle nodular hyperplasia,\(^35\) which is consistent with the modern research mechanism of “Zhengjia (lump)” in TCM, mainly treated with Guizhi Fuling Pill and Didang Decoction to dissipate blood stasis, eliminate lump, open orifices, and facilitate bowel movement.

**Guizhi Fuling Pill**

Guizhi Fuling Pill is a representative formula of classical prescriptions for gently eliminating lump or mass. Elderly men with gradually declining kidney yang, deficient kidney qi, and accumulated blood stasis in the bladder, the pathogenesis of BPH with blood stasis is similar to that of gynecological “Zhengjia (lump)” accumulating in the lower energizer, so Guizhi Fuling Pill can be used to treat BPH. This prescription consisting of Guizhi (Cinnamomi Ramulus), Fuling (Poria), Taoren (Persicae Semen), Shaoyao (Paeoniae Alba Radix), and Danpi (Moutan Cortex) can promote blood circulation, remove dampness, and eliminate masses.\(^36\)

Peng et al.\(^37\) used Guizhi Fuling Pill as the basic formula with modifications according to the syndrome to treat 100 BPH patients, achieving a total effective rate of 89%. Jing and Feng\(^38\) observed the clinical efficacy of Guizhi Fuling Pill in treating BPH, using Finasteride as a control. The observation group received a modified Guizhi Fuling Pill in addition to the oral administration of Finasteride. The results showed that the effective rate of the observation group (95.24%) was significantly better than that of the control group (73.81%). Ding’s research found that the mechanism of Guizhi Fuling Pill in treating BPH may be related to inhibiting the production of smooth muscle cells and regulating smooth muscle tension.\(^39\) Yang et al.\(^40\) proposed the possible mechanism of Guizhi Fuling Pill in improving BPH using network pharmacology and molecular docking technology, suggesting that Mairin (BA) inhibits estrogen signaling by reducing the expression of ERα, ARmRNA, and protein in BPH tissues, thereby improving the effects on BPH. Wang et al.\(^41\) found that Guizhi Fuling Capsules significantly reduced prostate wet weight and prostate index in BPH model rats. The mechanism of action may be related to downregulating the expression levels of DHT and VEGF in serum and prostate tissues and upregulating the expression of TGF-β1 in prostate tissues.

**Didang Decoction**

Didang Decoction consists of Shuizhi (Hirudo), Taoren (Persicae Semen), Dahuang (Rhei Radix et Rhizoma), and Mangchong (Tabanus) and has the function of breaking and removing blood stasis, and it is mainly used to treat heat syndrome of the lower energizer due to blood stasis.\(^42\) Taoren (Persicae Semen) and Dahuang (Rhei Radix et Rhizoma) have the functions of clearing away blood heat, getting rid of the stale and bringing forth the fresh; Shuizhi (Hirudo) and Mangchong (Tabanus), as animal medicines, have the functions of eliminating blood stasis and phlegm.\(^43\) The combination of these medicines has a strong effect of activating blood, dissolving stasis, and breaking hard masses. The onset of BPH is closely related to blood stasis. Long-term illness brings forth blood stasis, and intermingling phlegm,
and blood stasis, leading to swelling and enlargement of the prostate compressing the urethra, and thus resulting in urinary retention. Didang Decoction breaks blood stasis and eliminates bad blood, suitable for qi stagnation and blood stasis in BPH, with the effects of clearing heat and blood stasis, naturally facilitating water pathways. Clinical application of Didang Decoction often achieves good results in treating BPH.  

Hua used modified Didang Decoction to treat 40 BPH patients, achieving a cure in 24 cases, significant effectiveness in 14 cases and ineffectiveness in 2 cases, with a total effective rate of 95%. Fan treated 185 BPH patients with modified Didang Decoction, achieving clinical cure in 63 cases, significant effectiveness in 96 cases, effectiveness in 18 cases, and ineffectiveness in 8 cases, with a total effective rate of 95.7%. Chang et al. found that Didang Decoction increases anti-inflammatory cytokine levels of interleukin-13 (IL-13) and interleukin-14 (IL-4) and reduces the expression of pro-inflammatory cytokine TNF-αmRNA, thereby reducing inflammatory responses.

**Fluid Retention**

In *Yellow Emperor’s Inner Classic* (*Huang Di Nei Jing*), it states: “Bladder disease involves urinary retention.” Dripping and dribbling urinary retention is the most critical and urgent symptom of BPH. Although the pathogenesis of BPH includes healthy qi deficiency and blood stasis, fluid retention is the most urgent symptom, and it has various manifestations. The bladder loses normal qi transformation and causes internal fluid retention, manifesting as weak urination, dribbling urination, and heaviness and distension in the perineum. Wuling Powder is used to transform qi and promote urination. For deficiency of both liver and spleen, blood stasis and dampness stagnation, difficulty urination, and abdominal pain, Danggui Shaoyao Powder can be used to strengthen the spleen, relieve dampness, transform phlegm, and remove fluid retention.

**Wuling Powder**

Wuling Powder consists of Fuling (Poria), Zhuling (Polyporus), Baizhu (Atractylodis Macrocephalae Rhizoma), Zexie (Alismatis Rhizoma), and Guizhi (Cinnamomi Ramulus). Among them, Zexie (Alismatis Rhizoma) dispels water retention in the bladder and triple energizer as the sovereign herb; Fuling (Poria) and Zhuling (Polyporus) mildly promote urination; Guizhi (Cinnamomi Ramulus) is pungent and sweet in nature, which can transform yang qi, combined with sweet and warm herbs Baizhu (Atractylodis Macrocephalae Rhizoma) to strengthen the spleen and promote urination. The combination of these herbs achieves the effect of transforming yang qi and promoting urination.

Modern pharmacological research has found that the effective components of Wuling Powder act on key targets estrogen receptor1 (ESR1) and androgen receptor (AR) of BPH, increase estrogen levels, reduce testosterone and dihydrotestosterone concentrations in the prostate and serum, regulate the balance between estrogen and androgen, and inhibit the growth and proliferation of epithelial and stromal cells in the prostate, thereby treating BPH. Yuan used modified Wuling Powder to treat 36 cases of BPH with chronic urine retention, achieving a total effective rate of 91.67%, with satisfactory therapeutic effects. Yan randomly divided BPH patients of kidney yang deficiency pattern into a treatment group and a control group, with 35 cases in each group. The treatment group took Wuling Powder, while the control group took Terazosin hydrochloride tablets. The results showed that the overall efficacy rate of the treatment group was 82.8%, significantly higher than the 57.1% overall efficacy rate of the control group (p < 0.05). The treatment group significantly improved the urination function of patients with BPH, with noticeable reductions in IPSS, residual urine volume, and a significant increase in maximum urine flow rate; compared to the control group, it was statistically significant (p < 0.05). Comparing residual urine volume measured by B-ultrasound before and after treatment, it confirmed that Wuling Powder could reduce the enlarged prostate. Liu and Wu observed the changes in levels of bladder detrusor muscle collagen types I and III induced by androgens in rats through experiments. The results showed that Wuling Powder could inhibit the proliferation of the rat prostate, alleviate bladder outlet obstruction, and significantly suppress the expression of collagen in the bladder detrusor muscle, suggesting that Wuling Powder could significantly prevent damage to the bladder detrusor muscle caused by rat prostate hyperplasia and stabilize bladder compliance. Its mechanism may involve reducing static pressure, alleviating the dynamics of BPH, enhancing immune function and antibacterial, anti-inflammatory, and antioxidant effects.

**Danggui Shaoyao Powder**

Danggui Shaoyao Powder is composed of Danggui (Angelicae Sinensis Radix), Chuanxiong (Chuanxiong Rhizoma), Fuling (Poria), Shaoyao (Paeoniae Alba Radix), Zexie (Alismatis Rhizoma), and Baizhu (Atractylodis Macrocephalae Rhzoma). In this prescription, Danggui (Angelicae Sinensis Radix), Shaoyao (Paeoniae Alba Radix), and Chuanxiong (Chuanxiong Rhizoma) can enter the blood phase to promote blood circulation and remove blood stasis; Fuling (Poria), Baizhu (Atractylodis Macrocephalae Rhzoma), and Zexie (Alismatis Rhizoma) can strengthen the spleen and promote urination, resolve phlegm, and remove fluid retention. The combination of these herbs treats liver and spleen deficiency, blood stasis, and damp stagnation syndrome. This prescription can be used to treat difficulty in urination and abdominal pain in patients with BPH.

Zhang believes that Danggui Shaoyao Powder has a mild effect on promoting blood circulation and removing blood stasis, and it can regulate the body’s microcirculation. Clinical research has proven that it is an effective prescription for BPH. Geng treated 60 BPH patients with supplemented Danggui Shaoyao Powder [10 g of Chuanxiong (Chuanxiong Rhizoma), 15 g of Danggui (Angelicae Sinensis Radix), 30 g of Fuling (Poria), 15 g of Baishao (Paeoniae Alba Radix), 30 g of Zexie (Alismatis Rhizoma), 30 to 120 g of raw Baizhu (Atractylodis Macrocephalae Rhizoma), 30 g of Yimucao (Leonuri

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Herba), and 30 g of Zaojiaici (Gleditsiae Spina)]. For the control group, six tablets of Qianliekang tablets, two capsules of Floxacin, and 1 mg of Diethylstilbestrol were administered each time. The results showed that the treatment group took up to 35 doses and at least 16 doses, with an overall efficacy rate of 98.3% (p < 0.05). Liu et al.\(^5\) studied 80 BPH patients and divided them into two groups. The observation group received Danggui Shaoyao Powder combined with Wuling Powder, while the control group was treated with Finasteride. The results showed that after treatment, the patients' quality of life in the observation group significantly improved, with notable improvements in physiological functions (PF), role-physical functions (RF), general health (GH), vitality (VT), role emotional (RE), and mental health (MH), etc. The overall efficacy rate of the observation group (85%) was higher than that of the control group (72.5%), and both groups showed significant changes in IPSS index, maximum urine flow rate, and residual urine volume after treatment, and the observation group showed better efficacy than the control group after treatment (p < 0.05).

**Conclusion**

BPH, as the most common urological disease in middle-aged and elderly men, seriously affects patients' health and quality of life. Active prevention and treatment of the occurrence and development of BPH is of great significance. Due to the complexity of the cause of the disease, modern medicine has not yet fully clarified the pathogenesis of BPH, making it impossible to determine the best therapeutic method. In TCM, it believes that the fundamental cause of BPH is healthy qi deficiency, treated with Jingui Shengpi Pill and Zhenwu Decoction to transform kidney qi, and warm yang to promote urination; blood stasis is a key pathogenesis of BPH, treated with Guizhi Fuling Pill and Didang Decoction to resolve blood stasis, open orifices, and facilitate bowel movements; fluid retention is the most urgent symptom of BPH, treated with Wuling Powder and Danggui Shaoyao Powder to promote qi and water metabolism, and address acute symptoms.

Although classical prescriptions have considerable advantages, the literature reviews suggest that clinical research on using classical prescriptions to treat BPH under standardized designs is still in its early stages, with observations of clinical efficacy facing issues of insufficient sample size. Mechanism studies indicate that classical prescriptions show certain effects in changing BPH hemodynamics and neuroendocrine function, regulating aquaporin proteins, adjusting osmotic pressure, and balancing fluid metabolism. However, research on the action mechanism of classical formulas on corresponding signaling pathways and action targets still has great potential for improvement.

**CRediT Authorship Contribution Statement**

Lin Zhang: Conceptualization, investigation, data curation, formal analysis, and writing original draft. Yang Wang: Date curation, formal analysis, and methodology. Mingze Liu: Writing-review and editing. Zhenliang Wang: Methodology, resources, supervision, project administration, writing-review, and editing.

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**Conflict of Interest**

The authors declare no conflict of interest.

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