

BENIGN PROSTATIC HYPERPLASIA (BPH)

Benign prostatic hyperplasia is characterized by progressive enlargement of the prostate gland (commonly seen in men older than age 50), causing varying degrees of urethral obstruction and restriction of urinary flow.

CARE SETTING

Community level, with more acute care provided during outpatient procedures.

RELATED CONCERNS

Prostatectomy
Psychosocial aspects of care
Renal failure: acute

Patient Assessment Database

CIRCULATION

May exhibit: Elevated BP (renal effects of advanced enlargement)

ELIMINATION

May report: Decreased force/caliber of urinary stream; dribbling
Hesitancy in initiating voiding
Inability to empty bladder completely; urgency and frequency of urination
Nocturia, dysuria, hematuria
Sitting to void
Recurrent UTIs, history of calculi (urinary stasis)
Chronic constipation (protrusion of prostate into rectum)

May exhibit: Firm mass in lower abdomen (distended bladder), bladder tenderness
Inguinal hernia; hemorrhoids (result of increased abdominal pressure required to empty bladder against resistance)

FOOD/FLUID

May report: Anorexia; nausea, vomiting
Recent weight loss

PAIN/DISCOMFORT

May report: Suprapubic, flank, or back pain; sharp, intense (in acute prostatitis)
Low back pain

SAFETY

May report: Fever

SEXUALITY

May report: Concerns about effects of condition/therapy on sexual abilities
Fear of incontinence/dribbling during intimacy
Decrease in force of ejaculatory contractions

May exhibit: Enlarged, tender prostate

TEACHING/LEARNING

May report: Family history of cancer, hypertension, kidney disease
Use of antihypertensive or antidepressant medications, OTC cold/allergy medications containing sympathomimetics, urinary antibiotics or antibacterial agents
Self-treatment with saw palmetto or soy products

Discharge plan considerations: **DRG projected mean length of stay: 3.7 days**
May need assistance with management of therapy, e.g., catheter

Refer to section at end of plan for postdischarge considerations.

DIAGNOSTIC STUDIES

Urinalysis: Color: Yellow, dark brown, dark or bright red (bloody); appearance may be cloudy. pH 7 or greater (suggests infection); bacteria, WBCs, RBCs may be present microscopically.

Urine culture: May reveal *Staphylococcus aureus*, *Proteus*, *Klebsiella*, *Pseudomonas*, or *Escherichia coli*.

Urine cytology: To rule out bladder cancer.

BUN/Cr: Elevated if renal function is compromised.

Prostate-specific antigen (PSA): Glycoprotein contained in the cytoplasm of prostatic epithelial cells, detected in the blood of adult men. Level is greatly increased in prostatic cancer but can also be elevated in BPH. *Note:* Research suggests elevated PSA levels with a low percentage of free PSA are more likely associated with prostate cancer than with a benign prostate condition.

WBC: May be more than 11,000/mm³, indicating infection if patient is not immunosuppressed.

Uroflowmetry: Assesses degree of bladder obstruction.

IVP with postvoiding film: Shows delayed emptying of bladder, varying degrees of urinary tract obstruction, and presence of prostatic enlargement, bladder diverticuli, and abnormal thickening of bladder muscle.

Voiding cystourethrography: May be used instead of IVP to visualize bladder and urethra because it uses local dyes.

Cystometrogram: Measures pressure and volume in the bladder to identify bladder dysfunction unrelated to BPH.

Cystourethroscopy: To view degree of prostatic enlargement and bladder-wall changes (bladder diverticulum).

Cystometry: Evaluates detrusor muscle function and tone.

Transrectal prostatic ultrasound: Measures size of prostate and amount of residual urine; locates lesions unrelated to BPH.

NURSING PRIORITIES

1. Relieve acute urinary retention.
2. Promote comfort.
3. Prevent complications.
4. Help patient deal with psychosocial concerns.
5. Provide information about disease process/prognosis and treatment needs.

DISCHARGE GOALS

1. Voiding pattern normalized.
2. Pain/discomfort relieved.
3. Complications prevented/minimized.
4. Dealing with situation realistically.
5. Disease process/prognosis and therapeutic regimen understood.
6. Plan in place to meet needs after discharge.

NURSING DIAGNOSIS: Urinary Retention [acute/chronic]

May be related to

Mechanical obstruction; enlarged prostate

Decompensation of detrusor musculature

Inability of bladder to contract adequately

Possibly evidenced by

Frequency, hesitancy, inability to empty bladder completely; incontinence/dribbling

Bladder distension, residual urine

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Urinary Elimination (NOC)

Void in sufficient amounts with no palpable bladder distension.

Demonstrate postvoid residuals of less than 50 mL, with absence of dribbling/overflow.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Urinary Retention Care (NIC)</p> <p>Independent</p> <p>Encourage patient to void every 2–4 hr and when urge is noted.</p> <p>Ask patient about stress incontinence when moving, sneezing, coughing, laughing, lifting objects.</p> <p>Observe urinary stream, noting size and force.</p> <p>Have patient document time and amount of each voiding. Note diminished urinary output. Measure specific gravity as indicated.</p> <p>Percuss/palpate suprapubic area.</p> <p>Encourage oral fluids up to 3000 mL daily, within cardiac tolerance, if indicated.</p> <p>Monitor vital signs closely. Observe for hypertension, peripheral/dependent edema, changes in mentation. Weigh daily. Maintain accurate I&O.</p> <p>Provide/encourage meticulous catheter and perineal care.</p> <p>Recommend sitz bath as indicated.</p>	<p>May minimize urinary retention/overdistension of the bladder.</p> <p>High urethral pressure inhibits bladder emptying or can inhibit voiding until abdominal pressure increases enough for urine to be involuntarily lost.</p> <p>Useful in evaluating degree of obstruction and choice of intervention.</p> <p>Urinary retention increases pressure within the ureters and kidneys, which may cause renal insufficiency. Any deficit in blood flow to the kidney impairs its ability to filter and concentrate substances.</p> <p>A distended bladder can be felt in the suprapubic area.</p> <p>Increased circulating fluid maintains renal perfusion and flushes kidneys, bladder, and ureters of “sediment and bacteria.” <i>Note:</i> Initially, fluids may be restricted to prevent bladder distension until adequate urinary flow is reestablished.</p> <p>Loss of kidney function results in decreased fluid elimination and accumulation of toxic wastes; may progress to complete renal shutdown.</p> <p>Reduces risk of ascending infection.</p> <p>Promotes muscle relaxation, decreases edema, and may enhance voiding effort.</p>
<p>Collaborative</p> <p>Administer medications as indicated:</p> <p style="padding-left: 20px;">Androgen inhibitors, e.g., finasteride (Proscar);</p> <p style="padding-left: 20px;">Alpha-adrenergic antagonists, e.g., tamsulosin (Flomax), prazosin (Minipress), terazosin (Hytrin), doxazosin mesylate (Cardura);</p> <p style="padding-left: 20px;">Antispasmodics, e.g., oxybutynin (Ditropan);</p>	<p>Reduces the size of the prostate and decreases symptoms if taken long-term; however, side effects such as decreased libido and ejaculatory dysfunction may influence patient’s choice for long-term use.</p> <p>Studies indicate that these drugs may be as effective as Proscar for outflow obstruction and may have fewer side effects in regard to sexual function.</p> <p>Relieves bladder spasms related to irritation by the catheter.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Urinary Retention Care (NIC)</p>	
<p>Collaborative</p>	
<p>Rectal suppositories (B & O);</p>	<p>Suppositories are absorbed easily through mucosa into bladder tissue to produce muscle relaxation/relieve spasms.</p>
<p>Antibiotics and antibacterials.</p>	<p>Given to combat infection. May be used prophylactically.</p>
<p>Catheterize for residual urine and leave indwelling catheter as indicated.</p>	<p>Relieves/prevents urinary retention and rules out presence of ureteral stricture. Coudé catheter may be required because the curved tip eases passage of the tube through the prostatic urethra. <i>Note:</i> Bladder decompression should be done with caution to observe for sign of adverse reaction, e.g., hematuria (rupture of blood vessels in the mucosa of the overdistended bladder) and syncope (excessive autonomic stimulation).</p>
<p>Irrigate catheter as indicated.</p>	<p>Maintains patency/urinary flow.</p>
<p>Monitor laboratory studies, e.g.: BUN, Cr, electrolytes;</p>	<p>Prostatic enlargement (obstruction) eventually causes dilation of upper urinary tract (ureters and kidneys), potentially impairing kidney function and leading to uremia.</p>
<p>Urinalysis and culture.</p>	<p>Urinary stasis potentiates bacterial growth, increasing risk of UTI.</p>
<p>Prepare for/assist with urinary drainage, e.g., cystostomy.</p>	<p>May be indicated to drain bladder during acute episode with azotemia or when surgery is contraindicated because of patient's health status.</p>
<p>Prepare for surgical intervention, e.g.: Balloon urethroplasty/transurethral dilation of the prostatic urethra;</p>	<p>Inflation of a balloon-tipped catheter within the obstructed area stretches the urethra and displaces prostatic tissue, thus improving urinary flow.</p>
<p>Transurethral incision of the prostate (TUIP);</p>	<p>A procedure of almost equivalent efficacy to transurethral resection of the prostate (TURP) used for prostates with estimated resected tissue weight of 30 g or less. It may be performed instead of balloon dilation with better outcomes. Procedure can be done in ambulatory or short-stay settings. <i>Note:</i> Open prostate resection procedures (TURP) are typically performed on patients with very large prostate glands.</p>
<p>Transurethral microwave thermotherapy (TUMT).</p>	<p>Heating the central portion of the prostate by the insertion of a heating element through the urethra destroys prostate cells. Treatment is usually completed in a one-time procedure carried out in the physician's office.</p>

NURSING DIAGNOSIS: Pain, acute

May be related to

Mucosal irritation: bladder distension, renal colic; urinary infection; radiation therapy

Possibly evidenced by

Reports of pain (bladder/rectal spasm)

Narrowed focus; altered muscle tone, grimacing; distraction behaviors, restlessness

Autonomic responses

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Pain Level (NOC)

Report pain relieved/controlled.

Appear relaxed.

Be able to sleep/rest appropriately.

ACTIONS/INTERVENTIONS	RATIONALE
Pain Management (NIC)	
Independent	
Assess pain, noting location, intensity (scale of 0–10), duration.	Provides information to aid in determining choice/effectiveness of interventions.
Tape drainage tube to thigh and catheter to the abdomen (if traction not required).	Prevents pull on the bladder and erosion of the penile-scrotal junction.
Recommend bedrest as indicated.	Bedrest may be needed initially during acute retention phase; however, early ambulation can help restore normal voiding patterns and relieve colicky pain.
Provide comfort measures, e.g., back rub, helping patient assume position of comfort. Suggest use of relaxation/deep-breathing exercises, diversional activities.	Promotes relaxation, refocuses attention, and may enhance coping abilities.
Encourage use of sitz baths, warm soaks to perineum.	Promotes muscle relaxation.
Collaborative	
Insert catheter and attach to straight drainage as indicated.	Draining bladder reduces bladder tension and irritability.
Instruct in prostatic massage.	Aids in evacuation of ducts of gland to relieve congestion/inflammation. Contraindicated if infection is present.
Administer medications as indicated: Narcotics, e.g., meperidine (Demerol);	Given to relieve severe pain, provide physical and mental relaxation.
Antibacterials, e.g., methenamine hippurate (Hiprex);	Reduces bacteria present in urinary tract and those introduced by drainage system.
Antispasmodics and bladder sedatives, e.g., flavoxate (Urispas), oxybutynin (Ditropan).	Relieves bladder irritability.

NURSING DIAGNOSIS: Fluid Volume, risk for deficient

Risk factors may include

Postobstructive diuresis from rapid drainage of a chronically overdistended bladder
Endocrine, electrolyte imbalances (renal dysfunction)

Possibly evidenced by

[Not applicable; presence of signs and symptoms establishes an *actual* diagnosis.]

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Hydration (NOC)

Maintain adequate hydration as evidenced by stable vital signs, palpable peripheral pulses, good capillary refill, and moist mucous membranes.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Fluid Management (NIC)</p> <p>Independent</p> <p>Monitor output carefully. Note outputs of 100–200 mL/hr.</p> <p>Encourage increased oral intake based on individual needs.</p> <p>Monitor BP, pulse. Evaluate capillary refill and oral mucous membranes.</p> <p>Promote bedrest with head elevated.</p> <p>Collaborative</p> <p>Monitor electrolyte levels, especially sodium.</p> <p>Administer IV fluids (hypertonic saline) as needed.</p>	<p>Rapid/sustained diuresis could cause patient’s total fluid volume to become depleted and limits sodium reabsorption in renal tubules.</p> <p>Patient may have restricted oral intake in an attempt to control urinary symptoms, reducing homeostatic reserves and increasing risk of dehydration/hypovolemia.</p> <p>Enables early detection of and intervention for systemic hypovolemia.</p> <p>Decreases cardiac workload, facilitating circulatory homeostasis.</p> <p>As fluid is pulled from extracellular spaces, sodium may follow the shift, causing hyponatremia.</p> <p>Replaces fluid and sodium losses to prevent/correct hypovolemia following outpatient procedures.</p>

NURSING DIAGNOSIS: Fear/Anxiety [specify level]

May be related to

Change in health status: possibility of surgical procedure/malignancy
Embarrassment/loss of dignity associated with genital exposure before, during, and after treatment; concern about sexual ability

Possibly evidenced by

Increased tension, apprehension, worry
Expressed concerns regarding perceived changes
Fear of unspecified consequences

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Anxiety [or] Fear Control (NOC)

Appear relaxed.
Verbalize accurate knowledge of the situation.
Demonstrate appropriate range of feelings and lessened fear.
Report anxiety is reduced to a manageable level.

ACTIONS/INTERVENTIONS	RATIONALE
Anxiety Reduction (NIC)	
Independent	
Be available to patient. Establish trusting relationship with patient/SO.	Demonstrates concern and willingness to help. Encourages discussion of sensitive subjects.
Provide information about specific procedures and tests and what to expect afterward, e.g., catheter, bloody urine, bladder irritation. Be aware of how much information patient wants.	Helps patient understand purpose of what is being done, and reduces concerns associated with the unknown, including fear of cancer. However, overload of information is not helpful and may increase anxiety.
Maintain matter-of-fact attitude in doing procedures/ dealing with patient. Protect patient's privacy.	Communicates acceptance and eases patient's embarrassment.
Encourage patient/SO to verbalize concerns and feelings.	Defines the problem, providing opportunity to answer questions, clarify misconceptions, and problem-solve solutions.
Reinforce previous information patient has been given.	Allows patient to deal with reality and strengthens trust in caregivers and information presented.

NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding condition, prognosis, treatment, self-care, and discharge needs

May be related to

Lack of exposure/recall, information misinterpretation

Unfamiliarity with information resources

Concern about sensitive area

Possibly evidenced by

Questions, request for information; verbalization of the problem

Inappropriate behaviors, e.g., apathetic, withdrawn

Inaccurate follow-through of instructions, development of preventable complications

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Knowledge: Disease Process (NOC)

Verbalize understanding of disease process/prognosis and potential complications.

Identify relationship of signs/symptoms to the disease process.

Knowledge: Treatment Regimen (NOC)

Verbalize understanding of therapeutic needs.

Initiate necessary lifestyle/behavior changes.

Participate in treatment regimen.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Teaching: Disease Process (NIC)</p> <p>Independent</p>	
<p>Review disease process, patient expectations.</p>	<p>Provides knowledge base from which patient can make informed therapy choices.</p>
<p>Encourage verbalization of fears/feelings and concerns.</p>	<p>Helping patient work through feelings can be vital to rehabilitation.</p>
<p>Give information that the condition is not sexually transmitted.</p>	<p>May be an unspoken fear.</p>
<p>Review drug therapy/use of herbal products and diet, e.g., increased fruits, soy beans.</p>	<p>Some patients may prefer to treat with complementary therapy because of decreased occurrence/lessened severity of side effects, e.g. impotence.</p>
<p>Recommend avoiding spicy foods, coffee, alcohol, long automobile rides, rapid intake of fluids (particularly alcohol).</p>	<p>May cause prostatic irritation with resulting congestion. Sudden increase in urinary flow can cause bladder distension and loss of bladder tone, resulting in episodes of acute urinary retention.</p>
<p>Address sexual concerns, e.g., during acute episodes of prostatitis, intercourse is avoided, but may be helpful in treatment of chronic condition.</p>	<p>Sexual activity can increase pain during acute episodes but may serve as massaging agent in presence of chronic disease. <i>Note:</i> Medications such as finasteride (Proscar) are known to interfere with libido and erections. Alternatives include terazosin (Hytrin), doxazosin mesylate (Cardura), and tamsulosin (Flomax), which do not affect testosterone levels.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Teaching: Disease Process (NIC)</p> <p>Independent</p> <p>Provide information about basic sexual anatomy. Encourage questions and promote a dialogue about concerns.</p> <p>Review signs/symptoms requiring medical evaluation, e.g., cloudy, odorous urine; diminished urinary output, inability to void; presence of fever/chills.</p> <p>Discuss necessity of notifying other healthcare providers of diagnosis.</p> <p>Reinforce importance of medical follow-up for at least 6 mo to 1 yr, including rectal examination, urinalysis.</p>	<p>Having information about anatomy involved helps patient understand the implications of proposed treatments because they might affect sexual performance.</p> <p>Prompt interventions may prevent more serious complications.</p> <p>Reduces risk of inappropriate therapy, e.g., use of decongestants, anticholinergics, and antidepressants, which can increase urinary retention and may precipitate an acute episode.</p> <p>Recurrence of hypertrophy and/or infection (caused by same or different organisms) is not uncommon and requires changes in therapeutic regimen to prevent serious complications.</p>

POTENTIAL CONSIDERATIONS following acute hospitalization (dependent on patient's age, physical condition/presence of complications, personal resources, and life responsibilities)

Urinary Retention [acute/chronic]—urethral obstruction, decompensation of detrusor musculature, loss of bladder tone.
Infection, risk for—urinary stasis, invasive procedure (periodic catheterization).