

BENIGN PROSTATIC HYPERPLASIA: DIAGNOSIS AND TREATMENT Guideline Overview

Agency for Health Care Policy and Research
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—The Editor

Benign prostatic hyperplasia (BPH) is a condition in which a man's prostate is enlarged but otherwise normal. BPH is not prostate cancer and is not related to cancer. Although BPH is rarely a life-threatening disease, it clearly affects the quality of life for some men.

Men with BPH may experience urinary difficulties. Symptoms may include frequent urination; a need for urination more often during the night; straining to urinate; a feeling of urgency for urination; hesitant, weak, or intermittent stream; and a sensation of incomplete emptying. These symptoms are due to the obstruction of urine flow caused by pressure on the urethra by the enlarged prostate and by secondary changes in bladder function.

The prostate is a walnut-sized gland found at the

base of the bladder. It wraps around the urethra, the tube that carries urine from the bladder out through the penis.

BPH is common in older men, with its prevalence increasing with age. By age 60, more than half of men have identifiable BPH; by age 85, prevalence increases to about 90%. It is estimated that one in every four men in the United States will require treatment for the relief of symptomatic BPH by age 80.

The most common treatment for BPH is transurethral resection of the prostate (TURP). It is one of the most common surgical procedures performed in the Medicare population. In 1992, over 221 000 TURP surgeries were performed on men 65 and older, at a cost of more than \$1 billion to Medicare.

ADDRESSING THE PROBLEM

To develop a clinical practice guideline on the diagnosis and treatment of BPH, the Agency for Health Care Policy and Research (AHCPR), a federal agency within the Public Health Service, convened a multidisciplinary panel of private-sector experts. This topic was selected because:

- BPH is highly prevalent among men, especially older men.
- Much is still unknown about the natural history and long-term outcomes for several BPH treatments.
- Indicators to help in the proper timing for treatment also are lacking.
- There is significant variation in treatment for BPH because of these uncertainties, both in the United States and internationally.

The panel had several major objectives in developing the BPH guideline:

- Identify the most effective methods for diagnosing

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BPH Guideline Panel: John D. McConnell, MD (Chair), University of Texas Southwestern Medical Center; Michael J. Barry, MD, Harvard Medical School and Massachusetts General Hospital; Reginald C. Bruskewitz, MD, University of Wisconsin-Madison; Anton J. Bueschen, MD, University of Alabama at Birmingham; Sherwood E. Denton, MD, urologist, Phoenix, Arizona; H. Logan Holtgrewe, MD, urologist, Annapolis, Maryland; John L. Lange, MD, Holt-Krock Clinic, Fort Smith, Arkansas; Bruce L. McClennan, MD, FACR, Mallinckrodt Institute of Radiology, St Louis; Winston K. Mebust, MD, Kansas University Surgical Association; Nancy J. Reilly, RN, MSN, CURN, University of Pennsylvania; Richard G. Roberts, MD, JD, University of Wisconsin-Madison; Stephen A. Sacks, MD, University of California at Los Angeles; John H. Wasson, MD, Dartmouth Medical School.

KEY POINTS ABOUT BPH

For Health Care Providers

- There are effective methods for diagnosing and treating BPH. For many cases, watchful waiting is the most appropriate treatment.
- Open communication with the BPH patient is the central element of effective diagnosis and treatment. Make sure he tells you about his symptoms; explore the degree to which they interfere with his quality of life. Discuss the risks and benefits of each treatment. All decisions on treatment options should be made in concert with the patient.
- Find out more about BPH. Read *Clinical Practice Guideline Number 8: Benign Prostatic Hyperplasia: Diagnosis and Treatment* and use its companion *Quick Reference Guide for Clinicians*. Give your patients copies of *Treating Your Enlarged Prostate: Patient Guide*. All versions are available from AHCPR. Talk with the patient and answer questions after he reads the patient guide.

For Patients

- BPH is not cancer and does not cause cancer. BPH is not known to be related to cancer.
- The chances of having prostate problems increase as men age. More than half of men over age 60 have BPH. Factors associated with prevention of BPH are not known.
- BPH progresses differently in every individual. Many men with BPH have mild symptoms and may never need treatment. If they do have symptoms that bother them or progress, a number of choices for treatment are available.
- It is important for BPH patients to talk openly with their doctors about symptoms. Ask as many questions as needed. Patients should know about and understand the possible treatments and their risks and benefits before deciding on a course of action.
- Find out more about BPH. Read *Treating Your Enlarged Prostate: Patient Guide* (available from AHCPR). AHCPR has published two versions for health care providers: *Benign Prostatic Hyperplasia: Clinical Practice Guidelines* and its *Quick Reference Guide for Clinicians*.

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BPH.

- Identify and describe the most appropriate treatments, based on patient preferences and clinical need.
- Educate patients about BPH and related treatment choices so that they can become full partners in determining their care.
- Encourage research related to BPH and suggest a research agenda to the scientific community.

FINDINGS AND RECOMMENDATIONS

Learning about BPH and exploring the benefits and risks of treatment alternatives are responsibilities to be shared by the patient and his health care providers. Open communication, mutual decision making, and patient-centered care are key parts of the BPH Clinical Practice Guideline. The panel's recommendations focus on diagnosis and treatment.

Diagnosis

A thorough initial evaluation should be conducted with a patient who has symptoms suggesting BPH. This evaluation should include:

- Detailed medical history.
- Physical examination, including a digital rectal examination (DRE) and a focused neurologic examination.

- Urinalysis by dipstick testing or microscopic examination.
- Measurement of serum creatinine to assess kidney function.

Measurement of serum prostate-specific antigen (PSA) is an optional additional test. It is an appropriate test to consider for many patients, but not in all—especially very elderly men.

During the initial evaluation, patients should be asked to complete a symptom assessment questionnaire developed by the American Urological Association (AUA). Using the patient's responses to seven questions, BPH symptoms can be classified as mild, moderate, or severe.

BPH symptoms are not specific to the disease; many other urinary conditions have similar symptoms. The BPH panel believes that several commonly used diagnostic tests have value in the evaluation of routine cases, but the panel also believes that the evidence was not strong enough to require these tests in every case. The tests are:

- Uroflowmetry.
- Pressure-flow studies.
- Measurement of postvoid residual urine.

Some tests used in evaluating BPH were found not to be necessary in routine cases:

- Urethrocystoscopy.
- Imaging of the upper urinary tract by ultrasonography or intravenous urography.
- Filling cystometry.

Treatment

There are five treatments with acceptable benefits and risks:

- *Watchful waiting*, which involves regular monitoring but no active treatment. This is appropriate for most men who have BPH with mild symptoms, but watchful waiting may be selected by men with more severe symptoms.
- *Alpha-blocker drugs*, which help relax muscles in the prostate. Alpha blockers can relieve symptoms, but they also have side effects such as dizziness, fatigue, and blood pressure fluctuations. There is no current evidence that alpha blockers reduce BPH complication rates or the need for future surgery.
- *Finasteride drug treatment* (Proscar), which can reduce prostate size and help reduce symptoms. Six months or more are needed for full benefits to be noticeable. Side effects can include a change in sex drive, impotence, and decreased volume of ejaculate. As with alpha blockers, there is no current evidence that finasteride reduces BPH complication rates or the need for future surgery.
- *Balloon dilation*, in which a balloon-tipped catheter is threaded through the urethra and into the bladder. The balloon is then inflated to stretch the urethra and allow urine to flow more easily. This appears to be a temporary solution, with symptoms often recurring within 2 years.
- *Surgical treatment*, which offers the best chance for relieving symptoms but also has the highest rate of complications. The three major types of surgery are transurethral resection of the prostate (TURP), transurethral incision of the prostate (TUIP), and open prostatectomy.

In addition to these five approaches, new technologies for treating BPH are being studied: laser surgery, coils, hypothermia, microwave thermal therapy, prostatic stents, and new drugs. The panel found that there were insufficient data to recommend for or against these new therapies.

Treatment Choice

Patients should weigh how much their symptoms

bother them and understand the benefits and risks of each treatment before choosing a particular one. If they have mild symptoms, watchful waiting is appropriate. Men with moderate or severe symptoms may want medical (drug) or surgical treatment. Serious complications occasionally associated with BPH are best managed by surgery.

FOR MORE INFORMATION

Guideline information is available free of charge in several forms:

- *Clinical Practice Guideline*, which is intended for practitioners, presents the panel's findings and recommendations and provides supporting evidence and references.
- *Quick Reference Guide for Clinicians*, also intended for practitioners, summarizes the *Clinical Practice Guideline* and is a companion publication.
- *Patient Guide*, published in English and Spanish, is a brochure for consumers that describes BPH, methods for diagnosing the problem, and options for treatment.

To order these publications, call toll free (800) 358-9295 or write AHCPR Publications Clearinghouse, PO Box 8547, Silver Spring, MD 20907.

GUIDELINE DEVELOPMENT

AHCPR convened a private-sector, multidisciplinary panel of urologists, internists, a nurse, a radiologist, and a family practitioner. In developing the guideline, the panel conducted an exhaustive review of the scientific and clinical knowledge about BPH and held a public hearing to solicit oral and written testimony from groups and individuals who were not on the panel but concerned about the issue.

The results of the literature review and public hearing were used to develop a draft guideline. The draft was submitted to a multidisciplinary group of clinicians and other health care professionals representative of those for whom the guideline was being developed. This group evaluated the guideline for validity, efficacy, and applicability in their own practice settings. Comments from reviewers were incorporated into the final guideline document.