

TREATMENT OF MEN WITH MINIMALLY SYMPTOMATIC BENIGN PROSTATIC HYPERPLASIA—PRO: THE ARGUMENT IN FAVOR

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In early cases, where the symptoms are not aggravated . . . patients may be safely told that they may wait.

Hugh Hampton Young¹

For patients with mild symptoms, at present there does not appear to be any reason to offer therapy.

Patrick C. Walsh²

Throughout the 20th century, men with minimally symptomatic benign prostatic hyperplasia (BPH) were generally advised to defer treatment. During most of this period, prostatectomy was the only accepted treatment, and, despite advances in surgical care, observation alone was considered preferable to surgery for men with few symptoms, provided no complications were present. In such cases, treatment deferral has always appeared reasonable, because mild “prostatism” is not bothersome and often seems a normal part of the aging process, progression is usually slow, symptoms often regress spontaneously, and surgical treatment entails the possibility of complications and the likelihood of retrograde ejaculation.

However, effective nonoperative treatment for men with BPH has recently become available,^{3,4} and the “watchful waiting” dogma should now be reevaluated when substantial enlargement of the prostate is discovered. This reasoning is based on an emerging body of knowledge revealing that (a) BPH is a progressive condition in many men, (b) progression of BPH commonly leads to complica-

tions that are life-altering, to hospitalization, and to surgery, (c) identification of men at risk of BPH progression is now possible, and (d) well-tolerated medical therapy can help prevent BPH progression and reduce the incidence of acute urinary retention and the need for surgery. Thus, certain men—mainly those with prostate volumes exceeding 30 cm³—have become compelling candidates for preventive medical treatment, even though their symptom scores may be low.

BPH progression in middle-age men generally involves (a) an increasing prostate gland volume, as much as 2.4 cm³/yr,^{5,6} (b) symptomatic deterioration (International Prostate Symptom Score) in 55%,⁷ (c) decreasing urinary flow, as much as 4.5%/yr,⁸ and, ultimately, (d) development of complications and the need for surgery in up to 34% of men.^{9,10} Such evidence of BPH progression has been found in community-based longitudinal and cross-sectional studies (eg, the Baltimore Longitudinal Study of Aging and the Olmsted County Study) and in the placebo-treated control patients of large randomized trials. The evidence for BPH progression has been qualitatively consistent in a wide variety of studies.

The complications from BPH progression include bleeding, infection, stone formation, and acute urinary retention (AUR), the last usually necessitating surgical intervention. In the Olmsted County study, a 60-year-old man with moderate symptoms of BPH had a 10-year average risk for AUR of 13.7%, several times greater than his risk of hip fracture (4.9%), stroke (7.2%), or myocardial infarction (5.1%)¹¹ (Fig. 1). In men with prostate volumes exceeding 30 cm³, the risk of AUR is considerably greater than average (see below). Preventive measures are now widely used for hip fracture, stroke, and myocardial infarction. Although AUR is not life-threatening, it is a serious morbid event, usually accompanied by great discomfort, hospitalization, and surgery. Prevention would be desirable.

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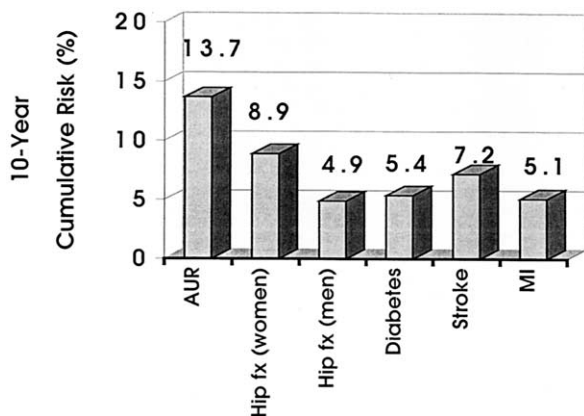


FIGURE 1. Ten-year cumulative incidence of acute urinary retention for 60-year-old men compared with other common conditions. Reprinted with permission from Jacobsen SJ, Girman CJ, and Lieber MM: Natural history of benign prostatic hyperplasia. *Urology* 58(suppl 6A): 5–16, 2001.

The identification of men at greatest risk of BPH progression is now possible using the prostate volume or its surrogate, the serum PSA level. PSA determination is often considered a prostate cancer test, but the PSA level may also be used as a marker for BPH. In a study of 4600 men in various clinical trials, the whole prostate volume, as measured by transrectal ultrasonography or magnetic resonance imaging, correlated highly with the serum PSA level, (ie, log-linear relationship), within each age group studied.¹² Thus, in men with BPH, the serum PSA level is an excellent surrogate for prostate volume: the greater the prostate volume the higher the serum PSA level.

Because it is a proxy for prostate volume, the serum PSA level is a marker for BPH progression. The men most likely to experience progression, as defined above, are those with substantial increases in prostate volume, generally estimated to be 30 cm³ or greater and reflected in serum PSA levels of approximately 1.5 ng/mL or greater.^{13,14} Because the predictive value of PSA for BPH progression was obtained in community-based studies, where symptom criteria were not a requisite for inclusion, the relationship appears to be independent of symptoms. In general, the greater the serum PSA level, the greater the risk of subsequent prostate growth, of symptomatic and uroflow deterioration, and, most importantly, of AUR and surgery (Fig. 2). Biopsy exclusion of prostate cancer underlies the use of serum PSA levels in this way.

BPH progression is primarily mediated by androgen-fueled prostate growth. Dihydrotestosterone is the major intraprostatic androgen, and its presence can be greatly reduced by inhibitors of 5-alpha-reductase, such as finasteride and dutasteride.^{3,4,15} In men with symptomatic prostatomegaly (volume 30 cm³ or greater, PSA level of 1.5

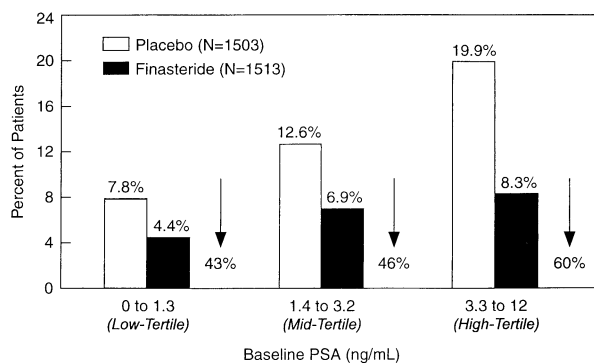


FIGURE 2. Four-year incidence of either AUR or BPH-related surgery in patients treated with placebo or finasteride, stratified in tertiles by baseline serum PSA. Arrows denote reduction in risk by log-rank test. Reprinted with permission from Roehrborn CG, McConnell JD, Lieber MM, et al: Serum prostate-specific antigen concentration is a powerful predictor of acute urinary retention and need for surgery in men with benign prostatic hyperplasia. *Urology* 53: 473–480, 1999.

ng/mL or greater), 5-alpha-reductase inhibitor drugs have been shown to lower significantly the chances of AUR,^{4,12} without affecting the ability to detect the development of prostate cancer.^{4,16} Both drugs are well-tolerated, and both are currently being evaluated in long-term prostate cancer chemoprevention trials.

Although most data currently available come from studies of men with moderate symptoms, much evidence is emerging to support the concept that all men with a PSA level of 1.5 ng/mL or greater from BPH—symptomatic or not, bothered or not—are candidates for 5-alpha-reductase inhibitor treatment. In clinical practice, the biopsy report session is a natural forum for addressing this new option with men at risk.

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