

MODERN GUIDELINES ON BENIGN PROSTATIC HYPERPLASIA

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INTRODUCTION

Benign prostatic hyperplasia (BPH) is closely related to urinary symptoms. Mild urinary symptoms are very common in the aging man, and beyond the age of 60 years 40% of men have lower urinary tract symptoms (LUTS). The exact prevalence of symptomatic BPH, however, is difficult to determine, because BPH does not always cause urinary symptoms. The prevalence of BPH is increasing because the number of aging males in the population is increasing. Consequently the medical costs associated with BPH are increasing as well. The guidelines developed under the sponsorship of the world health organization were among the first to provide definitions and recommendations for the diagnostic evaluation and treatment of men presenting with LUTS caused by BPH.¹ These recommendations are based on a thorough review of the available literature and the global subjective opinion of recognized experts serving on focused committees.

Guidelines have been developed in order to maintain optimal management, thereby lowering failure rates of treatment. Most guidelines have survived the test of time but need to be updated because of recent information that has become available

about new treatments. In the present review we will address controversies and recent developments regarding guidelines on BPH.

HOW TO MAKE THE DIAGNOSIS

It is now realized that the symptom complex of 'prostatism' is only one part of four interrelated concepts, namely those of anatomical prostatic hyperplasia, the presence of LUTS (commonly referred to as prostatism), the urodynamic presence of obstruction, and possibly the presence of detrusor dysfunction or failure. Most diagnostic assessment tools are directed at one of these concepts. As is true for any disease the diagnostic work up of patients presenting with LUTS should be directed towards identifying those patients who have BPH, and to exclude other underlying disease processes. It is important to identify that test and procedures that every man with LUTS can expect from his physician regardless of the country in which he resides. In recent study 15 guidelines were reviewed in terms of key aspects of diagnosis and therapeutic recommendations.² Most guidelines recommend taking a medical history, making use of a symptom score to describe and quantify symptoms. The international prostate symptoms score (IPSS) system is most often recommended and consists of eight questions, seven of which explore urinary

symptoms and one which investigates the quality of life.^{3,4,5} For assessment of prostate a digital rectal examination is considered an important and mandatory test, while the measurement of serum prostate specific antigen (PSA) level is recommended in the majority of the guidelines. These tests help to indicate the possible presence of prostate cancer and the size of the prostate gland.^{3,4} Another blood tests that is recommended is serum creatinine measurement. Long standing bladder outlet obstruction due to BPH may cause hydronephrosis and thus renal failure. It is generally recommended to include unflowmetry studies as part of the diagnosis of BPH, including post void residual urine volume measurement. These tests are considered as the best non invasive urodynamic tests to detect lower urinary tract obstruction.^{4,5} Beyond this standard basic evaluation the relative value of additional tests need to be addressed. Imaging of the upper or lower urinary tract may be performed if one expects abnormalities caused by severe and/or long-standing BPH. For the upper urinary tract a renal ultrasound scan is the recommended choice of imaging whereas transrectal ultrasound of the prostate has been documented as the most accurate way to calculate the prostate size if necessary when treatment is considered. To study the presence of bladder outlet obstruction more accurately, voiding charts may be used as well as urodynamic studies with pressure flow studies. These tests are considered optional in straight forward cases.⁴ Urethrocystoscopy is also recommended as an optional diagnostic test in all guideline; however, it should be performed if patients are to receive surgical treatment.

TREATMENT

Several treatment options have become available and recommendations can be based on and/or may include the severity of symptoms, prostate size, efficacy, morbidity, durability, surgeons choice and availability.

Patients with mild symptoms (IPPS < 7-8) are suitable candidates for watchful waiting policy. Medical therapy like Alpha-adrenergic receptor antagonists are safe, effective and have relatively few side effects.⁶ If these drugs fails interventional therapy is considered. Finasteride (5 \pm reduces inhibitor) which reduces the size of the larger prostate (> 40 cm³) after atleast three months of therapy. Surgery is recommended in complicated BPH or if previous medical therapy has failed. Surgery has still the best long term results. Successful outcome is dependent on the presence of bladder outlet obstruction and correlates with the general health of the patients.⁷ Open prostatectomy is done for larger prostate specially in cases if the transurethral resection is expected to last longer than one hour. Transurethral incision of the prostate is recommended in small prostates with no median lobe and a steep bladder neck. Over the past decade several minimally invasive non-surgical treatments have become available. These are transurethral microwave thermotherapy (TUMT), Holmium laser surgery, transurethral needle ablation, transrectal high intensity focused ultrasound, ethanol ablation and prostate stents. These options are still investigational therapies and should be reserved for patients who prefer to avoid major surgical procedures, or who no longer respond favourably to medication, or who have high comorbidity.^{8,9}

Guidelines for BPH have been prepared by and for urologists to provide recommendation on tests to be performed in the assessment of patients with LUTS, recommendations on treatment options and follow up. With regard to assessment the guidelines tend to include a minimal number of tests to provide the necessary information: a symptoms Score (to document the severity of complaints), a serum PSA test (to assess the prostate size and exclude prostate cancer), creatinine measurement (to exclude

renal failure) and flowmetry with post voiding residual (to study voiding performance). The only invasive examination that is still recommended as mandatory is the performance of digital rectal examination. Recently the urological community believe that PSA testing may replace digital rectal examination simply because of the higher sensitivity of this test to detect cancer, volume of the prostate and a predictor of BPH progression.¹⁰ Other tests like ultrasonography of the upper urinary tract transrectal ultrasound of the prostate, urodynamics or endoscopy are only indicated if one or more of the initial tests justifies doing so. Most of the treatments are guided by the outcome of the symptoms score, the treating physician, the availability of the treatment options and last but not least the patients preference.¹² Based on the severity of the symptoms score, treatments may be recommended ranging from watchful waiting to minimally invasive treatments and surgical management. The educational level, mood and presence of pain/discomfort of patients should be taken into account when interpreting scores as a combination of these characteristics could mean a difference of up to 6 points on the IPSS.¹³ The clinical data available support the belief that medical management provides an effective therapy for symptomatic patients with BPH and as such medical therapy has become one of the mainstay of therapy for the treatment of this condition.¹⁴ Future work is directed improving tolerability, safety and efficacy of these drugs. For instrumental treatment option, ranging from minimally invasive therapy to surgical management, it has become clear that both serve certain need. The European association of urology guidelines concluded that non surgical treatments should be recommended for patients who prefer to avoid surgery.⁴ The surgical management on the other hand, is still considered the standard (instrumental) treatment option and as such deserves to be fully recommended.

What is the influence and impact of guidelines in general? In most guidelines it is agreed that urethrocystoscopy cannot be used to determine the presence of bladder outlet obstruction. Urethrocystoscopy is only recommended in order to choose the appropriate treatment or to evaluate previous surgery of the prostate. It is mandatory if other diseases such as bladder cancer or urethral stricture are suspected. Finally, it is obvious that one should keep in mind that economic consideration will be considerable in preparing the guidelines for BPH. Stoevelaar and McDonnell concluded that costs of treatment of BPH will rise sharply as the population ages therefore clear guidelines need to be developed, validated and disseminated.⁶

FOLLOW UP

All treatment modalities need thorough follow up in order to evaluate the outcome. If a treatment fails another one can be considered. Most guidelines give little information on follow up schemes. There is not yet much information on the long term management of BPH. Current medical management strategies are often directed towards short term alleviation of symptoms rather than the long term prevention of disease progression. Prostate volume and serum PSA are emerging as strong predictors of BPH progression where as finasteride is the only medical therapy shown to prevent BPH progression.^{10,11} Guidelines that offer direction for the long term management of BPH are eagerly awaited and European association of Urology guidelines on BPH are among the first to do so.⁴

CONCLUSION

In the past decade treatment options for BPH have increased in number. Their aim is to reduce urinary symptoms and thereby improve quality of life. Treatment decisions should be evidence based, but despite

guidelines the choice of treatment is highly dependent of the personal preference of the urologist. Patients awareness of different treatment options is also increasing. Both urologist and patients should be adequately informed of failure rates and side effect of the different treatment options. The most cost-effective treatment for different patient groups is not yet known because of the lack of long term data.

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