LEADING ARTICLE

ALTERNATIVE THERAPY FOR BENIGN PROSTATIC HYPERTROPHY

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SINGAPORE MED J 1994; Vol 35: 347-348

The management of benign prostatic hyperplasia (BPH) has become the subject of great interest and debate in the last one to two years. Where traditionally transurethral resection of the prostate (TURP) was the last word in the treatment of this disease condition, it is no longer so today. TURP has been the standard surgical treatment of BPH for more than thirty years. Lately, however, there are a few studies which have found a higher re-operation and mortality rates after TURP as compared to open prostatectomy[1,2]. Most of these are retrospective reports, but there are prospective studies underway and their results are eagerly awaited[3]. Numerous treatment options are now available. These range from simply ingesting a pill to high technology modalities using lasers and ultrasound.

Benign prostatic hyperplasia presents in a wide variety of ways. These vary from retention of urine, which is still the commonest presentation in our population, to irritative symptoms like frequency, urgency and nocturia. The need for TURP in all clinically diagnosed BPH is coming under critical review. Except in extreme situations like retention of urine or azotemia, the indications for transurethral resection of the prostate are difficult to define. Symptoms of "prostatism" do not necessarily reflect the presence of BPH and the value of other means of assessment like endoscopy and urodynamics are equivocal[4].

Pathologically, the prostate gland enlarges in two phases[5]. The first stage is microscopic enlargement and this starts from puberty. The next phase is the macroscopic phase. However, not all microscopic BPH progress to become macroscopic BPH. Certain yet unidentified factors seem to be required for this change. Interestingly also, not all patients having macroscopic BPH will present clinically with outflow obstruction. Prostatic hyperplasia is not a homogenous condition. There are varying components of glandular and stromal hyperplasia in each enlarged gland and it may well be that different components respond to different modalities differently[6]. For example, a gland with largely glandular hyperplasia is not going to respond well to the administration of alpha-receptor blockers. At the moment, however, it is impossible to tell from clinical presentation, the component which is responsible for the patient's symptoms. Will we reach a stage where we need to do a prostatic biopsy before deciding on the treatment modality most suitable?

One of the more publicised modalities of treatment is microwave therapy where the temperature of the prostate gland is raised by means of a microwave antenna to levels at which protein denaturation occur. The urethra and the rectum are, meanwhile, protected from damage. Most machines employ the transurethral route for heating the prostate as opposed to the earlier proposed transrectal route. The catheter that houses the microwave antenna also has a cooling system to cool the urethra. It also carries temperature sensors to monitor urethral temperature. This modality is still in its early stages. Short term results are encouraging with subjective response around 60%[7]. Objectively, there is an increase in the flow rate but this increase is not remarkable. There is already evidence that hyperthermia of the prostate cannot be considered to be an effective alternative to prostatectomy[8]. Long term results are keenly awaited for. In principle, it is hard to imagine a relatively imprecise treatment modality replacing an accurate resection of the gland. Patients undergoing treatment by microwave thermotherapy are reported to experience a lower incidence of impotence as compared to TURP. The other attraction of the procedure is that it can be carried out as a day-surgery case. The procedure can, however, be uncomfortable and patients are better off with some form of sedation. The duration of treatment is usually an hour. Most machines are able to treat the condition in one session nowadays.

Various other means of decreasing the outflow obstruction have been devised. Balloon dilatation of the prostate[9,10] was popular for a short period of time but has fallen into disrepute because of the poor long term results. The aim of this procedure is to dilate the prostatic urethra to such an extent that capsular tears occur and the anterior commissure splits. In this way the prostate is released from its tight capsular binding. The placement of the dilating balloon within the urethra is of critical importance as an improperly placed balloon can cause damage to the urethral sphincter. Selection of patients has an important bearing on the outcome of treatment. It has been shown that patients with small prostates and good bladder function fare well with balloon dilatation[11]. It is, on the other hand, unsuitable for patients with enlarged median lobes. This procedure may still have a place in the short term management of a severely crippled patient. Likewise the insertion of prostatic coils to maintain the prostatic urethra open[12,13], although the effect will be longer lasting. The purpose of the prostatic coil is to maintain the urethra open and patent by compressing the prostate gland against its capsule.

Drugs like the alpha receptor blockers which act to decrease the outflow resistance by causing a relaxation of the sphincter tone have been in use for some time[14]. The effects are not long lasting and side effects considerable but they do have a small place in the management of BPH. Coming into prominence are the 5 alpha reductase inhibitors[15]. These drugs block the conversion of testosterone to the active component, dihydrotestosterone within the prostate gland. Since the growth of the prostate is androgen dependent, it is

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conceived that this blockade will inhibit the glandular enlargement. These drugs are still in the stage of clinical trials and what has emerged is that although they have an effect, they will have to be taken life-long. Another important question that arises concerning drug therapy is who should be prescribing the medication. Is it going to be the general practitioner or the urologist? Before drug therapy is decided upon, two important factors have to considered. First, true obstruction must be demonstrated and the symptoms are not the result of a malfunctioning bladder. Secondly, malignancy of the prostate gland must be excluded. The urologist will be the person best able to determine these.

In the horizon, laser ablation and high intensity focused ultrasonic destruction of the prostate are developing fast. Laser ablation seems to be a promising modality to replace TURP. It is a fast endoscopic procedure which can be carried out without much blood loss and possibly on an outpatient basis. Robotic TURP is also being developed in some centres and a time may come when the urologist can operate from his armchair.

These new modalities will add to the armamentarium of the urologists. Patients who are considered high risks for TURP can now be treated by other means. It is not because TURP is an ineffective modality of treatment that urologists are now considering alternative therapy.

TURP is still the standard recommendation for BPH. It is an operation that has stood the test of time and provided relief of symptoms at low morbidity and mortality rates[16,17]. This has also been borne out by a local study which has revealed that only 2% of patients required follow up of 2 years. Most patients were discharged within 1 year[18]. It has to be admitted, though, that not all patients with BPH are ideal candidates for TURP. The role of the newer alternatives are being explored at the moment in many centres and have created a hive of activity in each of these centres and in international meetings. In time to come their place in the management of BPH will be better defined. Also the symptomatology and pathology of the disease will become more detailed and a blending of these with the treatment modality may occur.

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