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“How About a TURP?”

One of the reasons I chose urology as my specialty, when studying at UCLA School of Medicine, was that it afforded the chance to do something, on any given day, that could improve an individual's quality of life, forever. So many interventions (diagnostic tests, medications, surgeries) we provide as doctors are aimed at patient's fears of dying (too young), and as such, may either overlook or even counteract the premise of living happily, if not indefinitely.

Surgical relief of prostate obstruction is one of those “somethings” that fits the bill--with a 95% or so chance of improvement in a man's urinary symptoms with a favorably low side effect profile. To many patients and non-urology doctors, the prostate is a “black box”, filled with mystery as to its anatomy, tucked “way down there” in the deep pelvis; as well as its function and, frankly, its very necessity. For sure, the prostate gland produces the bulk of the semen, and is needed to propel sperms during orgasm, while also providing them a safe environment to for their “journey” during the reproductive process. The gland is one of two bladder control barriers in men; and its complete removal (in surgeries done for cancer, not for obstruction) does “stress” the distal sphincter mechanism (part of the pelvic floor musculature) to, by itself, having to “dam up” the flow of urine, until one is ready to go.

The 1st portion of the urethra passes out of the bladder through the prostate, as would a hole in an elongated doughnut. Under genetic and hormonal influences, the tissues underneath the prostatic part of the urethra begin to grow slowly, usually starting in the 4th decade of life. There has been increased interest, of late, not only on prostate growth

regulation by testosterone (especially the amount of “T” that gets into the tissues and is converted to a more powerful androgen), but also on higher estrogen to testosterone ratios. Aging, and more so obese men, can have higher blood estrogen levels, felt due to active conversion of testosterone to estradiol in the body’s “peripheral” tissues, including in the fat cells themselves.

As the “nodules” of benign peri-urethral glands (and the “stroma”--or connective tissue between the glands) grow, they coalesce into a more unified mass of pulp-like tissue that pushes the sides of the urethra inward and sometimes the base of the bladder upward. The resultant obstruction causes variable symptoms, in good part related to the degree of strength of the man’s bladder. “Bladder decompensation” refers to the progressive failure of the bladder’s “detrusor” muscle to maintain enough contractility to force most or all of the urine through the narrowing outlet. Similar problems are seen in the heart, e.g., with stenosis of the aortic valve.

Symptoms you may have of bladder decompensation, likely to be helped by TURP (see below), include slow stream, feeling of incomplete emptying, frequency with small voids (often more prevalent at night), and sometimes unreasonable urge to go with less volume than expected. Prostate bleeding, infections, and decline in renal function are associated problems. Getting up often at night to urinate (especially with “easy flow”) or dribbling at the end of the stream, as isolated symptoms, may not be helped by a TURP. Extreme urgency may or may not respond to surgery. The “extreme” of incomplete emptying, urinary retention (usually sudden total blockage with progressive bladder distention and pain), associated with an enlarged prostate and needing a catheter, is often resolved by this surgery.

TURP is an abbreviation for “**transurethral resection of the prostate**”. It has been around since the early 20th century. The endoscopic operation, often done under general anesthesia, is performed to permanently remove obstructing tissue, allowing the bladder function to return to some semblance of its earlier days. The urologist, with his resectoscope, goes through the penis into the prostate, just below the bladder; and literally cuts through the urethra to get to the benign tissue caving it inwards. In effect, a wide open cavity--allowing easy flow of urine--is created. The urethra will regenerate itself in this area within a few months of the surgery. The glandular prostate tissue, using one of several energy sources, is “reamed” or “roto-rootered” out. The tissue can be vaporized (i.e., to a certain extent evaporated); removed (carved out or sculpted) in what are called “chips” that float into the bladder/are irrigated out of the body by the end of the procedure; or a combination of both. Blood vessels (“bleeders”) are easy to control once the base of the veins and arteries is revealed by thoroughly trimming all the BPH tissue out to the capsule-which is sort of like the inside of an orange rind. Subtotal/inadequate resection of the prostatic tissue (so-called adenoma) is an invitation to delayed bleeding.

Minimally invasive substitutes for TURP, often done in the urologist’s office, do not work nearly as well. The rate for “repeat” TURPs for persistent or recurrent symptoms of obstruction is in the order of only 5%. Prostate procedures that have to be repeated every few years--or despite which, still require the use of lower urinary tract medicines to improve symptoms--are probably not worthwhile. Be careful about being sold a bill of goods. The doctor may actually make more profit from these minor operations than from a TURP, since he is using his office (he can charge a “facility fee”) in lieu of a hospital or surgery

center. Studies clearly show these “minimalist” procedures, in the long run, cost as much or more than TURP, and are less effective. The only benefit may be diminution in backwards ejaculation. I myself no longer do either office TUMT (transurethral microwave therapy) or TUNA (transurethral needle ablation--using radiofrequency waves).

TURP can nowadays be done in the hospital or surgery center in an hour or less, with minimal blood loss, and usually with a one night stay or less (i.e., as an outpatient, which is more suitable for healthy, younger patients with average to smaller gland size). Mortality rate is less than 1/1000, and can be lowered by a good preoperative cardiac clearance. The rates of excess bleeding, blood transfusions, significant infection, or prolonged hospitalization/recovery are extremely low. Loss of urinary control, to the point of chronically needing a pad or diaper is felt to be under 1 in 250 to 500 cases—and perhaps far less, with newer technologies which afford better visualization of the anatomy.

Retrograde (backwards) ejaculation is seen in 50-75% of TURP's; and should not, in my mind, be seen as a complication, but just as a natural result of resecting prostate tissue that protrudes through and obstructs the bladder neck. It may be unavoidable. Anecdotally, I recently had two middle aged men who were not only pleased with their voiding results--but who also said their orgasms were “more intense than ever”, despite retrograde ejaculation. If you think you'd not be able to deal with alterations in ejaculation, you should not have a TURP. I myself have not seen new-onset erectile dysfunction after a TURP, although men in the TURP age group often have pre-existing partial impotence or have other conditions such as diabetes that increases the likelihood they will develop ED. Occasionally, there are psychological reasons for post-TURP sexual decline. The rare “TURP gone wrong”,

with perforation of the outer prostate capsule, might cause at least a temporary drop in erectile rigidity.

I have tried most of the modalities of TURP, including electroresection (monopolar and bipolar) and laser (including “diode” laser and “green light”). **In my hands, electrocautery resection using the bipolar instruments is superior.** I find laser for TURP to be tedious and wearying to my wrist, since the laser fiber has to be rotated back and forth manually—and if the rate of “twisting the wand” is not constant, what results looks like Swiss cheese, i.e., not a smooth, well-sculpted prostatic cavity (fossa). The “laser TURP” urologist has to be especially on guard as to the arc of the laser beam, to be sure the tissues just below the gland (including distal sphincter) are not injured, since scarring, poor function, and urinary leakage can ensue. Overall, however, the outcome of most laser TURP’s is good.

The bipolar resectoscope, in which the electrical current enters one “pole” of a loop (or alternatively a “button”) electrode and passes out through the other end, provides more of a “cut and seal” effect on the tissues; those blood vessels not sealed with each swipe seem to lend themselves much more to immediate cauterization than with the older monopolar resectoscopes. Some of the tissue is vaporized, as would occur with the laser. Less bleeding means a quicker, more efficient surgery; and superior visualization. It also permits resection of some quite enlarged/obstructing glands that used to necessitate an open/usually transvesicle (“opening the bladder like a clam shell”) approach. It is probably safer to do a bipolar than a monopolar electroresection in “large gland” cases that may take 90 minutes or longer.

Bipolar TURP is one of my favorite operations. It is, like many other urologic surgeries (ureteroscopic stone removal and groin/scrotal surgery, to name a few) fun for me to perform. If done on the right patient, it can often get a man who has been in urinary retention, requiring an indwelling catheter, voiding once again. It can make a man feel young and re-energized, spending far less time in the bathroom, getting more sleep at night, and sometimes feeling better psychologically and sexually. Like with any surgery, you need to discuss with your urologist whether your particular symptoms are likely to respond and improve. Doing so will reduce any unrealistic expectations.

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