



TURP or TUIP

We recommend that you read this carefully in order to prepare yourself or family members for the proposed procedure. If you still have any questions or concerns, we strongly encourage you to contact our office prior to your procedure. We may clarify any pertinent issues. "An educated patient is the best patient."

Definition

Transurethral = through or across the urethra (tube to which urine exits the bladder)

Resection = cutting away or removal. Some people refer to it as "scraping."

Incision = making a cut in

A special scope termed a "cystoscope" is placed in the urethra and guided into the bladder. The center portion of the prostate is identified. The obstructing prostate tissue is systematically resected until all of the obstructing tissue was removed.

In cases where the prostate is small and perhaps the problem is the increased tone of the prostate and bladder neck, we can do a more limited procedure. This would be an "incision" rather than a full "resection." In this regard, the procedure is termed a TUIP instead of a TURP.

Most TURPs are performed to treat a condition termed "benign prostatic hyperplasia" (BPH). With progressive BPH, the prostate enlarges and obstructs the proper flow of urine from the bladder. Most often, the reduced flow represents a combination of prostate enlargement and tone. Tone represents the prostate constricting down on the urethra as the urethra courses through the center of the prostate. Some patients with this condition may already have been on one or a combination of medications and increasing doses prior to needing the procedure. If the medications are no longer effective in alleviating symptoms, then a surgical procedure may be warranted. Sometimes, the medications are effective at the high doses, but side effects prohibit the use in a particular patient. In other instances, the symptoms are tolerable, but we have determined that the degree of obstruction is progressively damaging your bladder or

kidneys. The characteristics symptoms are those of an obstructed urinary pattern. The symptoms are most commonly recognized as:

- Straining (need to push to begin urination)
- Hesitancy (delayed onset of urination following the urge to urinate)
- Slow or diminished force of stream
- Urine stream that starts and stops
- A sensation of incomplete emptying of her bladder.

Other symptoms that may be associated are what we call irritative symptoms. These symptoms include frequency of urination, urgency to urinate, and waking up at night to urinate.

There are other types of procedures that are available to treat your condition. These have been explained in your surgical consultation. The pros and cons of each with respect to your health and your particular prostate condition will have already been discussed. In the urologic literature, the TURP is still considered the “gold standard” operation to which the results of all lesser procedures need to be compared.

The TURP is considered a minimally invasive procedure. There are other treatment modalities which essentially accomplish the same goal: unobstructing your urinary system and improving quality of life. Bipolar electricity can be utilized instead of monopolar electricity. The greenlight laser can be utilized to remove the obstructing prostate tissue. We utilize all of the current technology to treat the condition of BPH.

Preparation

As with any procedure in which anesthesia is administered, you will be asked not to eat or drink anything after midnight on the evening prior to your surgery. You may brush your teeth in the morning, but do not swallow the water. If you are on medications that must be taken, you will have discussed this with us and/or the anesthesiologist. Instructions will have been given to you. The procedure will not be performed if you are currently taken or have recently taken any medications that may interfere with your ability to clot your blood (blood thinners, aspirin, plavix, Coumadin, anti-inflammatory medications, etc.) The most common of these medications are aspirin and all related pain relievers or anti inflammatory compounds (whether prescription or over the counter). Please refer to the attached list and tell us if you took any of the the medications within the last 7 days. We will have reviewed all of your current medications with you during the pre operative consultation. You are obligated to inform us if anything has changed since your previous visit.

Procedure

To review the basics of what we discussed in the office: The actual procedure can take anywhere from 20-90 minutes depending on the particulars of the case and the size of your prostate. You will be placed in the lithotomy position (lying down on your back with your legs gently elevated in holsters called stirrups). The scope (which has continuous fluid running through it) is carefully inserted into the urethra and advanced into the bladder. We carefully examine the bladder to ensure that everything is within normal limits. The scope is then pulled back into the first part of the urethra termed the "prostatic urethra." Next, a special electric knife or similar technology is used to scrape away the inner core of the prostate. Think of it as coring an apple. In the TUIP, incisions are made with a slightly different type of electric knife to allow the prostate to open its center channel. In some occasions, we can use a specific type of laser to do the same procedure. Other than being a different type of technology, it does not change the procedure. We will have already discussed the advantages and disadvantages of each technology with you prior to scheduling the procedure. Once the resection is completed, all the prostate pieces are irrigated out of the bladder. They will be sent to the pathologist for examination under a microscope. Keep in mind, some of the technology we use to perform the TURP vaporize the tissue as opposed to resect the tissue. This means there is no pathologic tissue for analysis. At the end of the procedure, a catheter is placed in the bladder to allow for proper healing of the prostate channel.

Post Procedure

After the procedure, you will be in the recovery room until you are ready to be admitted to a room or discharged to home. Approximately 70-80% of TURP procedures are done on an outpatient basis. The other 30% require a 1-2 day hospital admission. You will likely be discharged home with a catheter in place.

It is normal for you to feel a strong sense of urgency to urinate. This is from the procedure and from the presence of the catheter. In most patients, this dissipates within a couple hours. Some patients require medications to help relax the bladder while the catheter is in. The catheter may be attached to a large bag that runs fluid into the bladder (irrigation) to keep it washed out. Through a separate channel in the catheter, the fluid runs out into a drainage bag. This continuous bladder irrigation (CBI) is done to prevent blood clots from obstructing the catheter. Patient may have clear urine, mild blood, or even what appears to be a significant amount of blood or small clots. It is rare for the blood not to disappear within a day or 2. The rate of irrigation will be just adjusted to keep the urine on the clear-light pink side. Other patients may not require continuous irrigation and so there will not be any fluid running in. The urine will simply be draining out of the catheter and into a bag. In many patients, the catheter is removed the following morning and you are discharged home after urinating on your own. In patients with larger prostates, or in patients that still have moderate or significant blood in the urine, we may keep you in the hospital with a catheter for an extra day or so.

Typically, you can return to work within a few days to a week. If your occupation requires heavy lifting or straining, please let us know so that we may keep you out of your work for a slightly longer period of time.

Expectations of Outcome

Most patients are very satisfied after the procedure. We typically hear phrases such as “I can urinate like a teenager again.” The improvements typically noted immediately after the procedure are:

- Stronger force of stream
- Decrease standing around waiting for the urination to begin
- Decrease need to push
- Decreased starting and stopping of the urinary stream
- Loss of the sensation that you are not really emptying your bladder

In some patients, it may be difficult to control the urine for a couple weeks. You may notice that you are still voiding frequently and with some urgency. These symptoms can take a long time to disappear. In patients that were significantly obstructed for a prolonged period, these symptoms may never fully resolve. Nocturia (getting up at night to urinate) is typically the last symptom to resolve. In many instances, it may become less frequent, but never fully disappear. The reason is that nocturia can be due to several other physiologic issues and also because the night time ritual become somewhat habitual.

Retrograde ejaculation is when the semen (during ejaculation) goes backward into the bladder instead of forward out of the penis. This is expected to some degree in almost all patients. It may be that your semen volume is less, or absent altogether. You will still have the sensation of orgasm, but you may not see the semen. In this regard, you may be considered sterile.

Possible Complications of the Procedure

All surgical procedures, regardless of complexity or time, can be associated with unforeseen problems. They may be immediate or even quite delayed in presentation. While we have discussed these and possibly others in your consultation, we would like you to have a list so that you may ask questions if you are still concerned. Aside from the anesthesia complications, it is important that every patient be made aware of all possible outcomes which may include, but are not limited to:

- **Hematuria:** As we scrape the prostate tissue, small blood vessels may be cut and bleed. Throughout the entire procedure, we cauterize these vessels shut. At the end of the procedure, we carefully inspected the area to ensure there is no significant bleeding. Rarely a scab of the vessel we cauterize can fall off and cause delayed hematuria (blood

in the urine). In most cases, we can observe and it will spontaneously stop. Sometimes we will manipulate the catheter to compress the vessel. In patients with continuous irrigation, we can increase the rate of irrigation dripping into the catheter to clear the urine. If clots form they can block the catheter and we consequently will need to hand irrigate the clots out. Very rarely, we have to return to the operating room to put the scope back inside the bladder and re-cauterize. If bleeding is prolonged during or at after the operation, we would check your blood count. It is rare to need a blood transfusion, but certainly possible.

- **Deep Vein Thrombosis/Pulmonary Embolism:** In any operation, you can develop a clot in a vein of your leg (DVT). Typically, this presents 2-7 days after the procedure as pain, swelling, and tenderness to the touch in the lower leg (calf). Your ankle or foot can become swollen. If you notice these signs, you should go directly to an emergency room and call our office. Although less likely, this blood clot can move through the veins and block part of the lung (PE). This would present as shortness of breath and possibly chest pain. We may sometimes ask the medical doctors to be involved with the management of either of these problems.
- **Urinary Tract Infection or UroSepsis:** Although we may give you antibiotics, it is still possible for you to get an infection. It may be a simple bladder infection that presents with symptoms of burning with urination, urinary frequency, and a strong urge to urinate. This will usually resolve within a few days of antibiotic administration. Pyelonephritis represents a kidney infection and is also possible following a TURP and is more likely to cause symptoms of severe back pain, fevers, chills, nausea and vomiting. If the infection enters the bloodstream, you might feel very ill. This type of infection can present with both urinary symptoms and any combination of the following: fever, shaking chills, weakness, dizziness, nausea and vomiting. You may require a short hospitalization for intravenous antibiotics, IV fluids, and observation. This problem is more common in diabetics, patients on steroids, or patients with a weakened immune system. If you have symptoms suggesting any of the above after your discharge from the hospital or surgery center, you must contact us immediately and go to the nearest emergency room.
- **Urethral Stricture/Bladder Neck Contracture:** A stricture is scar tissue that can form anywhere in the urethra following prolonged instrumentation. It may occur weeks, months, or longer after the procedure. Scar tissue can also form at the exit (bladder neck) of the bladder. This is termed a bladder neck contracture. For either condition, it may be necessary to schedule another procedure to open the scar tissue. These procedures can be done with a small blade, electric knife or with a laser. These procedures are quick and almost always ambulatory. Scars at the end or tip of the urethra can sometimes be dilated in the office. In very rare instances, a stricture or contracture can recur.
- **TUR syndrome:** This only occurs in prolonged resections and is rarely seen in this procedure. Because many blood vessels may be opened while cutting away the prostate tissue, some of the irrigation fluid may enter the bloodstream and dilute the blood components. With the newer irrigation fluids, TUR syndrome is very unlikely. Severe cases, however, can cause heart or brain complications.

- **Ureteral Injury:** On either side of the bladder is a small ureteral orifice. This is the hole through which the ureter (tube from the kidney) enters the bladder. Occasionally, this opening can be near the bladder neck/prostate and be injured during the procedure. Within days to weeks, a scar could form over the orifice and block the kidney on that side. Sometimes we can unblock the tube by inserting a stent (drainage tube) on that side.
- **Urinary Incontinence:** The muscle responsible for preventing urinary leakage is in close proximity to the prostate and bladder neck. In rare circumstances, this muscle can be injured and result in urinary leakage.

We provide this information for the patients and family members. It is intended to be an educational supplement that highlights some of the important points of what we have previously discussed in the office. Alternative treatments, the purpose of the procedure, and the points on this page have been covered in face-to-face consultation.