

Advantages and Disadvantages of Turp and Tuip in Safe Hyperplasia of the Prostate Gland

Valiyev Xusan Toxirovich

Assistant of the department of urology and oncology

Abstract:

The prostate is a walnut-shaped gland that is part of the male reproductive system. The main function of the prostate is to make a fluid that goes into semen. The bladder neck is the area where the urethra joins the bladder. The bladder and urethra are parts of the lower [urinary tract](#). The prostate has two or more lobes, or sections, enclosed by an outer layer of tissue, and it is in front of the rectum, just below the bladder. The urethra is the tube that carries urine from the bladder to the outside of the body.

Keywords: Benign prostatic hyperplasia, urinary frequency, urinary urgency, dihydrotestosterone (DHT), laser surgery, TURP, TUIP.

Introduction

Benign prostatic hyperplasia—also called BPH—is a condition in men in which the prostate gland is enlarged and not cancerous. Benign prostatic hyperplasia is also called benign prostatic hypertrophy or benign prostatic obstruction. The prostate goes through two main growth periods as a man ages. The first occurs early in puberty, when the prostate doubles in size. The second phase of growth begins around age 25 and continues during most of a man's life. Benign prostatic hyperplasia often occurs with the second growth phase. As the prostate enlarges, the gland presses against and pinches the urethra. The bladder wall becomes thicker. Eventually, the bladder may weaken and lose the ability to empty completely, leaving some urine in the bladder. The narrowing of the urethra and urinary retention—the inability to empty the bladder completely—cause many of the problems associated with benign prostatic hyperplasia. The cause of benign prostatic hyperplasia is not well understood; however, it occurs mainly in older men. Benign prostatic hyperplasia does not develop in men whose testicles were removed before puberty. For this reason, some researchers believe factors related to aging and the testicles may cause benign prostatic hyperplasia. Throughout their lives, men produce testosterone, a male hormone, and small amounts

of estrogen, a female hormone. As men age, the amount of active testosterone in their blood decreases, which leaves a higher proportion of estrogen. Scientific studies have suggested that benign prostatic hyperplasia may occur because the higher proportion of estrogen within the prostate increases the activity of substances that promote prostate cell growth. Another theory focuses on dihydrotestosterone (DHT), a male hormone that plays a role in prostate development and growth. Some research has indicated that even with a drop in blood testosterone levels, older men continue to produce and accumulate high levels of DHT in the prostate. This accumulation of DHT may encourage prostate cells to continue to grow. Scientists have noted that men who do not produce DHT do not develop benign prostatic hyperplasia.

Men with the following factors are more likely to develop benign prostatic hyperplasia:

- ✓ age 40 years and older
- ✓ family history of benign prostatic hyperplasia
- ✓ medical conditions such as [obesity](#), heart and circulatory disease, and [type 2 diabetes](#)
- ✓ lack of physical exercise
- ✓ [erectile dysfunction](#)

Lower urinary tract symptoms suggestive of benign prostatic hyperplasia may include

- ✓ urinary frequency—urination eight or more times a day
- ✓ urinary urgency—the inability to delay urination
- ✓ trouble starting a urine stream
- ✓ a weak or an interrupted urine stream
- ✓ dribbling at the end of urination
- ✓ nocturia—frequent urination during periods of sleep
- ✓ [urinary retention](#)
- ✓ [urinary incontinence](#)—the accidental loss of urine
- ✓ pain after ejaculation or during urination
- ✓ urine that has an unusual color or smell

Symptoms of benign prostatic hyperplasia most often come from

- ✓ a blocked urethra
- ✓ a bladder that is overworked from trying to pass urine through the blockage

The size of the prostate does not always determine the severity of the blockage or symptoms. Some men with greatly enlarged prostates have little blockage and few symptoms, while other men who have minimally enlarged prostates have greater blockage and more symptoms. Less than half of all men with benign prostatic hyperplasia have lower urinary tract symptoms. Sometimes men may not know they have a blockage until they cannot urinate. This condition, called acute urinary retention, can result from taking over-the-counter cold or allergy medications that contain decongestants, such as pseudoephedrine and oxymetazoline. A potential side effect of these medications may prevent the bladder neck from relaxing and releasing urine. Medications that contain antihistamines, such as diphenhydramine, can weaken the contraction of bladder muscles and cause urinary retention, difficulty urinating, and painful urination. When men have partial urethra blockage, urinary retention also can occur as a result of alcohol consumption, cold temperatures, or a long period of inactivity.

Treatment options for benign prostatic hyperplasia may include

- ✓ lifestyle changes
- ✓ medications

- ✓ minimally invasive procedures
- ✓ surgery

A health care provider treats benign prostatic hyperplasia based on the severity of symptoms, how much the symptoms affect a man's daily life, and a man's preferences. Men may not need treatment for a mildly enlarged prostate unless their symptoms are bothersome and affecting their quality of life. In these cases, instead of treatment, a urologist may recommend regular checkups. If benign prostatic hyperplasia symptoms become bothersome or present a health risk, a urologist most often recommends treatment. Below is information about surgical methods:

Surgery to remove enlarged prostate tissue includes

- ✓ transurethral resection of the prostate (TURP)
- ✓ laser surgery
- ✓ open prostatectomy
- ✓ transurethral incision of the prostate (TUIP)

TURP. Transurethral resection of the prostate (TURP) is a common surgery that's used to treat urinary problems that are caused by an enlarged prostate. An instrument called a resectoscope is placed through the tip of the penis. It is then passed through the tube that carries urine from your bladder, called the urethra. The resectoscope helps a surgeon see and trim away extra prostate tissue that's blocking urine flow. TURP tends to be considered an effective treatment choice for men who have moderate to serious urinary problems that haven't gotten better with medicine. Other procedures that don't involve surgical cuts also are available to treat an enlarged prostate. Some of them work about as well as TURP. And in general, they cause fewer side effects and have a quicker recovery time. TURP helps ease urinary symptoms caused by benign prostatic hyperplasia (BPH), including:

- ✓ Frequent, urgent need to urinate.
- ✓ Trouble starting urination.
- ✓ Slow or prolonged urination.
- ✓ More trips to the bathroom at night.
- ✓ Stopping and starting again while urinating.
- ✓ The feeling that you can't fully empty your bladder.
- ✓ Urinary tract infections.

TURP also might be done to treat or prevent complications due to blocked urine flow, such as:

- ✓ Repeated urinary tract infections.
- ✓ Kidney or bladder damage.
- ✓ Not being able to control urination or to urinate at all.
- ✓ Bladder stones.
- ✓ Blood in urine.

Risks of TURP can include:

Short-term trouble urinating. This might last for a few days after the procedure. Until you can urinate on your own, you will need to have a thin, flexible tube called a catheter placed into your penis. It carries urine out of your bladder.

Urinary tract infection. This type of infection can happen after any prostate procedure. It becomes more and more likely the longer you have a catheter in place. Some men who have TURP have repeated urinary tract infections.

Dry orgasm. This is the release of semen during orgasm into the bladder rather than out of the penis. It's a common and long-term effect of any type of prostate surgery. Dry orgasm isn't harmful, and it doesn't tend to affect sexual pleasure. But it can make you less likely to get a female partner pregnant. Another name for it is retrograde ejaculation.

Erectile dysfunction. This is trouble getting or keeping an erection. The risk is very small, but erectile dysfunction can happen after prostate treatments.

Heavy bleeding. Very rarely, men lose enough blood during TURP that they need to receive donated blood through a vein. This is called a blood transfusion. Men with larger prostates seem to be at higher risk of heavy blood loss.

Trouble holding urine. Rarely, loss of bladder control is a long-term side effect of TURP. It's also called incontinence.

Low sodium in the blood, called hyponatremia. Rarely, the body absorbs too much of the fluid used to wash the surgery area during TURP. This can lead to having too much fluid and not enough sodium in the blood. When this happens, it's known as TURP syndrome or transurethral resection (TUR) syndrome. Without treatment, TURP syndrome can be life-threatening. A technique called bipolar TURP gets rid of the risk of this condition.

Need for re-treatment. Some men need follow-up treatment after TURP. Their symptoms come back or don't get better over time. Sometimes, more treatment is needed because TURP causes the urethra or the bladder neck to narrow, also called a stricture.

TUIP. Transurethral incision of the prostate (TUIP) is a procedure to treat urinary symptoms caused by an enlarged prostate, a condition known as benign prostatic hyperplasia (BPH). TUIP is generally used in younger men with a small prostate who are concerned about fertility. A combined visual and surgical instrument (resectoscope) is inserted through the tip of the penis into the tube that carries urine from your bladder (urethra). The prostate surrounds the urethra. The doctor cuts one or two small grooves in the area where the prostate and the bladder are connected (bladder neck) to widen the urinary channel and allow urine to pass through more easily. TUIP is one of several minimally invasive treatment options for BPH. To determine the right BPH treatment choice for you, your doctor will consider how severe your symptoms are, what other health problems you have, and the size and shape of your prostate.

TUIP helps reduce urinary signs and symptoms caused by BPH, including:

- ✓ Frequent, urgent need to urinate
- ✓ Difficulty starting urination
- ✓ Slow (prolonged) urination
- ✓ Increased frequency of urination at night
- ✓ Stopping and starting again while urinating
- ✓ The feeling of not being able to completely empty the bladder
- ✓ Urinary tract infections

TUIP might also be done to treat or prevent complications due to blocked urine flow, such as:

- ✓ Recurring urinary tract infections
- ✓ Kidney or bladder damage
- ✓ Inability to control urination or an inability to urinate at all
- ✓ Bladder stones
- ✓ Blood in the urine

TUIP can offer several advantages over other methods of treating BPH, such as transurethral resection of the prostate (TURP) and open prostatectomy. The advantages can include:

Lower risk of bleeding. TUIP can be a good option for men who take medication to thin their blood or who have a bleeding disorder that doesn't allow their blood to clot normally.

Minimal hospital stay. TUIP can be done on an outpatient basis, although some men need to stay overnight for observation. TUIP might be a safer option than surgery if you have certain other health problems.

Lower risk of dry orgasm. TUIP is less likely than some other BPH treatments to cause the release of semen during ejaculation into the bladder rather than out of the penis (retrograde ejaculation). Retrograde ejaculation isn't harmful, but it can interfere with the ability to father a child.

TUIP is generally safe with few if any major complications. Possible risks of TUIP can include:

Temporary difficulty urinating. You might have trouble urinating for a few days after the procedure. Until you can urinate on your own, you may need to have a tube (catheter) inserted into your penis to carry urine out of your bladder.

Urinary tract infection. This type of infection is a possible complication after any prostate procedure. An infection is increasingly likely to occur the longer you have a catheter in place. Treatment typically includes antibiotics.

Need for re-treatment. TUIP might be less effective on urinary symptoms than other minimally invasive treatments or surgery. You might need to be treated again with another BPH therapy.

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