Incontinence after Prostate Cancer

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I. What is urinary incontinence?

According to the International Continence Society, urinary incontinence is, "The objective demonstration of involuntary loss of urine consequent to bladder and/or sphincter dysfunction."

II. Types of Incontinence

There are three types of incontinence. Stress incontinence is leakage during physical activity that increases intra-abdominal pressure. Urge incontinence is leakage associated with an overwhelming need to urinate. Finally, there is mixed incontinence, which is a combination of the above. Most of the incontinence associated with prostate cancer treatment is the stress incontinence component.

III. The Process

The bladder is a reservoir that is meant to store urine at low pressure and adequate capacity, and it is a very intricate and neurologic process. There is control at many levels beginning at the brain, going through the spinal cord and into the neurocircuitry of the pelvis. The sphincter is a smooth muscle, and men have two continence mechanisms, the internal and external sphincters. Particularly after removal of the process, one of the continence mechanisms is removed, which means men are relying on their external sphincter, which is under voluntary control.

IV. Why am I incontinent?

The incontinence centers around the treatments that we have for prostate cancer. Most of what gets in the news is leakage or problems after having prostate cancer surgery, but the reality of it is that it doesn't really matter what treatment a patient has for prostate cancer. That is a complication. In addition, prior spinal disease or neurologic disease can also have an impact.

V. Occurrence of Male Incontinence

Fifty-five million men in the world suffer from loss of urinary control, and the rate of incontinence ranges from 2.5% up to 69% after prostate cancer treatment. The risk factors include the degree of nerve sparing, postoperative bladder neck contracture, combination/adjuvant treatment, presence of prior disease and salvage therapy.

Particular to post-prostatectomy, male incontinence often improves within three to six months of the surgery, but five to eight percent of men require treatment beyond conservative measures. It is certainly a minority of men, but it does happen. In addition, incontinence can be a late complication of radiation therapy, and it can be difficult to predict.

VI. Why treat incontinence?

Incontinence is a very significant quality of life factor. ED is now somewhat out in the open, but it is still very difficult for men to talk about incontinence. In addition, a man may not actually have ED but can certainly have a poor sex life because of leaking urine.

VII. What to expect at an office visit

I will start at an office visit by obtaining a history from the patient and doing a physical exam. A 24-hour pad test is conducted where I have a man weigh his pads dry and then wet for a 24-hour period to document it. It is a quantifier that I have found to be helpful in directing therapy. A cystoscopy is a scope with which we can look in the bladder. It is important to rule out a scar or bladder contracture because those things have to be treated first.

VIII. Management Options

There is the option of pads and diapers, which is a multi-billion-dollar business, but obviously is not the best in terms of quality of life. For men in particular, however, there is quite a stigma attached with pad usage. The Cunningham clamp actually works quite well, but there can also be problems with excoriation of the skin, pressure necrosis and erosion. It doesn't treat the underlying problems.

There are external and internal catheters, but these are usually not a solution for anyone who is a candidate for any other type of treatment.

There is no FDA-approved medication for stress incontinence whether it is for men or women, and that may be part of why it is so hard for men to come forward. There is some evidence to support that some types of antidepressants may improve stress incontinence, but I certainly would never put a patient on an antidepressant just for stress incontinence after prostate surgery. It is not a treatment, but you may hear about it. Anticholinergic medication may help in terms of the overactive bladder component particularly after radiation, but it won't cure the stress component.

Additional treatment options may include behavior modification, biofeedback, injectables and surgery.

IX. Behavioral Modification

Patients can decrease their fluid intake and void frequently, but at some point that becomes ridiculous. A man can't urinate every hour just so he won't leak, but within reason there are certain things that can be done. Caffeine and alcohol are bladder irritants so there are certain dietary things that can be identified. Patients can also avoid activity that increases intra-abdominal pressure, but that also becomes unacceptable as a real fix.

X. Pelvic Floor Rehabilitation

Kegel exercises are effective to some degree particularly in the early phases after prostate surgery. The problem is it is not particularly long acting. As a means of long-term improvement, it is probably not going to have a huge role. Interestingly, it has been shown to be more successful when it is incorporated into a formal training program.

XI. Bulking Agents

The idea of putting a bulking agent into the urethra has been done for decades. You do it with a scope through the penis, and the bulking material is injected just under the lining of the urethra. It is a very simple thing to do, but the problem with prostate cancer is that it doesn't work very well. It works in about 20 to 35% of men, and it is really not a proven effective treatment.

XII. Surgical Options for Male Stress Incontinence

Surgical options are the mainstay for patients with severe leakage or any degree of leakage that is bothersome particularly if they don't respond to conservative therapy. The newer slings are really better for mild to moderate degrees of leakage. In terms of the artificial sphincter, we have kind of gone away from the double cuff AUS and gone to a single cuff.

The InVance Male Sling is an effective treatment for mild to moderate incontinence. It is minimally invasive and can be done through a small incision below the scrotum in a 45-minute outpatient procedure. Continence is somewhat immediate, and nothing needs to be operated. The device is also completely hidden inside the body, and there was a 88% satisfaction rate when it came out. It has kind of fallen by the way side because of problems with the bone anchors, but it is still an option.

The AdVance Male sling is a new, innovative treatment option. It is a smaller piece of material, and the arms go through a bony window. It is done with three small incisions, and it is really a passive mechanism where it is just planted there and the patient doesn't really have to do anything beyond that. The success rate, which is loosely defined as cured or improved, is in the order of 65 to 80%.

The Virtue Male sling is very similar to the other approaches. It has two anterior arms, which come up in front of the pubic bone and are fixated at that point. It has a little bit different mechanism of action, but the concept is really the same in terms of providing support.

The artificial urinary sphincter is the gold standard. Over 100,000 have been implanted since 1972, and again it is essentially an outpatient procedure. It has a very high satisfaction rate, and that has been well documented in numerous studies. The success rates are in the low nineties. In any of the operations that I do, this may be the best procedure in terms of immediate patient satisfaction. It also has a very good track record of durability.

Complications for slings and the AUS include infection and erosions. The reoperation rate for slings is really unknown, and approximately 15% of the AUSs require revision surgery over a 10 to 15-year period.

XIII. What should you do next?

Patients need to talk to a urologist who can counsel them properly and educate them so they know their options.

XIV. Summary

Incontinence is a common problem related to prostate cancer treatment, and most cases resolve within six to twelve months of surgery. Some treatments are more effective than others, and surgical treatment options offer proven, long-term solutions. In terms of robotic prostatectomies, there appears to be a little bit earlier return of continence, perhaps three months as opposed to six, but in the long-term it doesn't look significantly different.