Urethral tape procedure

1. Introduction:
There are two types of urinary incontinence. One is called stress urinary incontinence because the person looses urine involuntarily while she or he is exposed to physical stress such as coughing, sneezing, running or even walking. This is caused by a deficient closure mechanism in the urethra. The urethral tape procedure supports the urethra like a hammock and tightens the urethra during physical stress maneuvers. The second type is called urge urinary incontinence and it is caused by involuntary uncontrolled contractions of the bladder wall that consists of smooth muscle (the same muscle as humans have in their stomach or bowel). With each contraction, the pressure in the bladder increases and this is perceived as an urge to urinate. If the contraction is strong enough it can actually expel the urine at the very moment of the contraction. The urethral sling is not designed to treat this type of urinary leakage. However, it can cure one half of the patients who have so called mixed urinary incontinence (both stress and urge incontinence).

2. Preparation for the procedure:
A healthy vaginal lining is the key to successful wound healing. Many women, after the removal of ovaries or after menopause, do not produce enough estrogen to maintain the health of their vaginal wall. Estrogen allows for ample blood supply and improved resistance to infections. Before surgery, the women deficient in estrogen will be asked to apply estrogen cream to the vaginal and urethral openings. Restoring the vaginal lining may take sometimes up to three months. In the case of mixed urinary incontinence, to help to reduce the incidence on urge incontinence, this time will be used for a bladder training program, learning pelvic floor muscle exercises, and receiving treatment from medication such as Detrol LA or Ditropan XL.

3. Surgery:
The urethral sling procedure is categorized as minimally invasive. It is meant to be a minimal burden to the patient as it requires a less than one inch incision. Though it is performed under local anesthesia, you will be sedated and thus forbidden from drinking or eating at least 8 hours before surgery (usually after midnight). In your preoperative visit you will be counseled on which of your usual medication you should take with a sip of water the morning of the surgery. I will see you before the anesthesiologist takes you to the operating room and you will have an opportunity to ask any remaining questions. Your sedation will be introduced in the holding area. Most likely you will not remember when I inject the local anesthetic into the skin and tissue behind the pubic bone, and into the "ceiling" of your vagina. Through a small incision, I will pass two needles connected by the Prolene® tape behind your pubic bone. This tape would serve as a support for the urethra. Subsequently, I will look into your bladder to make sure that it was not injured by the needle passage. Once the sling is in place, I will ask you to cough so that I can properly adjust the tension of the sling. Most likely you will not remember it. Once in the recovery room, you will be fully awakened.

4. Complications during the surgery:
As with all surgeries, complications may occur. During the needle passage I may injure your bladder. This happens in 3 out of 100 patients (3%). Should I injure the urethra, I will halt the procedure and repeat it after the injury has healed. On rare occasions the needle may injure a larger vessel causing bleeding and potential transfusion (0.5% chance).

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5. Hospital recovery:
Once awakened you may experience the urge to urinate, partly because I will be leaving some sterile water in your bladder, partly because the surgery causes irritation. Once you are sure that your bladder is full you will be requested by the nurse to go to the bathroom and void. Your voided volume will be measured. The nurse will scan your bladder with an ultrasound to determine how completely you emptied it. If you emptied well, you will be discharged home. If not, you may be asked to try again or you may be sent home with a catheter (tube) in your bladder with instruction on how to remove it on a following weekday.

6. Early complications:
You may have irritation or burning during urination for a few days after surgery. You should have only minimal pain, but sometimes you may feel some pulling in the groin or pain under the small wound above the pubic bone. Usually this subsides within one week. Your may experience some bloody spotting for a few days. Do not be surprised by some bruising over your lower abdomen. This will disappear within a few weeks. The following complications need to be reported to me. Uncommonly, you may develop a urinary tract infection presenting with some burning on urination, cloudy urine with an unpleasant smell. You may develop redness or discharge from the incisions. Your incision may open up because of delayed bleeding or tissue weakness (1% chance). In this case, the incision may be sutured again, or allowed to heal on its own, or the visible part of the sling will be cut out. Very rarely a small nerve can be trapped in the area of sling passage causing burning or sharp pain (less than a 1% chance). If you are not able to urinate after the removal of the catheter, you will be taught how to insert a short catheter into your bladder to empty it to completion. If after six weeks your situation has not been resolved, I will consider dividing the sling to release the obstruction.

7. Postoperative instructions:
In order to minimize over distending the bladder, you will need to urinate at least every three to four hours. Within a few days, you'll be able to return to your usual daily activities. You may start driving two days after the surgery. You may climb stairs or walk. Avoid lifting over 15 pounds, strenuous exercises and sexual intercourse until your first office visits four weeks after surgery. If you were using estrogen cream before the surgery, resume the application 2 days after the procedure. You can leave the small adhesive paper tapes (Steristrips) on your abdominal incisions for one week after surgery. They will curl at the edges and fall off on their own in 7-10 days. Do not bath or swim for three weeks after the procedure. You may shower. You will need to call my office at 817-465-8715 for your 4 week postoperative visit.

8. Late complications:
The sling material is considered a foreign body to your organism. On rare occasions, it can protrude through the urethral or bladder wall. It is caused by excessive tension on the sling, and is so rare; I have never seen it in my practice. It can also extrude through the vaginal wall. It is therefore of the outmost importance that you are seen in my office annually.

9. Outcomes
The objective and subjective cure rate is around 85-90% at seven years postoperatively. Approximately 10% will report improvement. The failure rate is around 3%. Since the procedure was developed in 1995 longer follow-up is not available.

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