TRANSVAGINAL TAPE SURGERY

Introduction

Urinary incontinence affects up to 13% of Australian men and 37% of Australian women. Stress urinary incontinence is the leaking of urine that occurs when external pressure on the bladder results in leakage due to a weak pelvic muscle floor or urinary sphincter muscle. The leakage is preceded by movements such as coughing, laughing, sneezing, sporting activities or lifting. It is more common in people who have diabetes, chronic cough, constipation, obesity, pregnancy and after childbirth.

The treatment depends on how bad your symptoms are and how they affect your lifestyle. Your doctor may recommend one or more of the following treatment options, usually starting with the least invasive.

1. Behaviour changes
    a) Stop smoking
    b) Avoid caffeine and alcohol
    c) Adjust fluid intake – 6-8 glasses of water regularly throughout the day
    d) Regular visits to the toilet to urinate (so the bladder is never very full)
    e) Regulating your bowel movements (fiber or laxatives)
    f) Weight loss if overweight
    g) Avoid spicy or acidic foods that cause bladder irritation
    h) Improve glucose control if diabetic
2. Medication
    a) Oxybutynin or Solifenacin for reducing urgency and frequency
    b) Duloxetine effective, however 25% discontinue due to nausea
    c) Oestrogen therapy is sometimes recommended in post-menopausal women with thinning and dryness of the vagina
3. Pelvic floor muscle training (3 months)
    a) Pelvic floor exercise can improve continence in 35-55% of sufferers
    b) More effective when taught by a physiotherapist (using biofeedback, electrical stimulation and visual reinforcement with ultrasound)
4. Devices
    a) Vaginal pessaries to support the bladder
5. Surgery
    a) Transvaginal tape (TVT)
    b) Transobturator tape (TOT)
    c) Fascial sling
    d) Collagen-like product injected around the urethra
    e) Colposuspension and prolapse repair

What does the procedure involve?

The TVT is a mesh-like tape that is inserted without tension into the vagina around the middle part of the urethra to provide support. The mesh holds the tape in place, and no anchors are needed. The TVT restores the angle and position of the urethra, to improve its ability to maintain a seal during normal activities. The cure rates of stress incontinence with a TVT are 80-90%.

The TVT is inserted under a general or spinal anaesthetic. A 4cm incision is made in the vagina, and the tissues around the urethra are dissected. A tunnelling device is used to bring the tape around the urethra, on either side of the bladder to the front of the abdomen, near the pubic bones. These are brought out through 5mm incisions on either side near the groin. The tape sits in a U shape around the urethra, and is placed without any tension. The vaginal incision is closed with absorbable sutures and a bladder catheter and vaginal pack are left in overnight.

The general anaesthetic and surgery takes approximately 45 minutes.

What are the alternatives?

Behaviour changes
Pelvic floor exercise
Medications
Devices
Surgery: TOT, fascial sling, injection of bulking materials into the bladder neck and around the urethra (Durasphere, Macroplastique), colposuspension, prolapse repair

What are the risks of surgery?

All operations have risks. These are explained below, with estimated likelihood of occurring and techniques used to prevent them.

Common (>10%)
Urinary urgency
Blood in the urine

Occasional (2-10%)
Cystitis (bladder infection)
Pain during sexual intercourse
Failure of leakage to improve or resolve
Urinary retention – temporary catheter, urethral dilatation or tape release

Rare (2%)
Anaesthetic or cardiorespiratory problems requiring intensive care
Chest infection, clots in the legs and lung, stroke, health attack, death
Blood loss requiring transfusion
Bowel, bladder or blood vessel injury
Mesh erosion into the bladder, urethra or vagina, requiring surgical removal
Mesh infection, requiring antibiotics and possible surgical removal

What should I do before surgery?

- See the continence advisor and physiotherapist for advice on catheterisation, health bladder habits and pelvic floor exercises
- Continue doing your pelvic floor exercises and walking regularly
- If you are obese, losing weight makes surgery easier and improves success
- If you smoke, giving up makes anaesthesia safer and reduces complication rates
- Establish and maintain a regular, soft bowel habit and avoid constipation
- Do not eat or drink for 6 hours before surgery

What should I expect after surgery?

Most patients spend 1-2 hours in the recovery bay after the operation, to ensure they are fully awake before returning to the ward. You will be given clear fluids to drink, and encouraged to sit up in bed. Ideally, you will be discharged the following morning. The vaginal pack and bladder catheter will be removed at 6am and the nurses will check that you are able to empty your bladder adequately.

You will need comfortable loose clothing, and arrange for someone to stay at home with you for the first night home. You should avoid heavy lifting (>5 kg, including shopping bags, washing baskets and children), repeated bending or straining, sexual intercourse, swimming, sporting activities and strenuous exercise for 4 to 6 weeks. After 1 to 2 weeks, you can resume normal daily activities and driving.

Discharge information

Drink 2L of fluid each day and include high fibre food in your diet. Do not strain to use your bowels, and take aperients if necessary. Use Paracetamol and/or Ibuprofen as required every 4-6 hours for pain. Emptying your bladder may feel different as the tissues recover from surgery. Do not push or strain, but relax, take your time, use the sound of running water or take a warm shower if required. If you are having difficulty, please contact the hospital ward or continence nurse.

The skin wounds should heal in 1 week, and most people have some vaginal bleeding or brownish discharge for several weeks. Please contact your surgeon through the rooms or hospital if you develop fevers, urine retention, excessive pain, bleeding, odour, discharge or pass clots in the urine.

References

Fact sheet provided on thewomens.org.au, the official Web site of the Royal Women's Hospital, Melbourne.
http://www.thewomens.org.au/Treatingurinaryincontinencemidurethralslingoperation

Medline Plus is a service of the U.S. National Library of Medicine and National Institutes of Health. This website provides reliable and up-to-date information about diseases, conditions and wellness issues in non-medical language.
http://www.nlm.nih.gov/medlineplus/ency/article/000891.htm