Contents

Vol. 1, No. 1

Tracheostomy: Postoperative Recovery

Bladder Neck Suspension Nursing Care: Preop, Postop, and Beyond

Perspectives
Recovery Strategies from the OR to Home

Bladder Neck Suspension Nursing Care: Preop, Postop, and Beyond

by Vicki Y. Johnson, RN, Phd, CURN

Abstract

Anti-incontinence surgical procedures, collectively referred to as bladder neck suspensions, have been effective for treatment of urethral hypermobility and bladder descent, eliminating involuntary urine leakage associated with genuine stress urinary incontinence. Concomitant use of sling procedures for better urethral coaptation and resistance has been effective for intrinsic sphincter dysfunction. Preoperative and postoperative nursing care and patient management are critical for identification of potential risks, preparation of the patient for surgery, and interventions to prevent or diminish possible complications. Patient education on admission and initiation of discharge planning is paramount to ensure successful surgical and nursing outcome measurements beyond the hospital stay.

Introduction

Urinary incontinence (UI) affects more than 13 million people in the United States, the majority of whom are women.[1] This condition includes but is not limited to stress, urge, reflex, overflow, functional, and intractable UI.[2] This discussion will be limited to stress

urinary incontinence (SUI), specifically Type I and II genuine SUI, and intrinsic sphincter dysfunction (ISD), Type III.

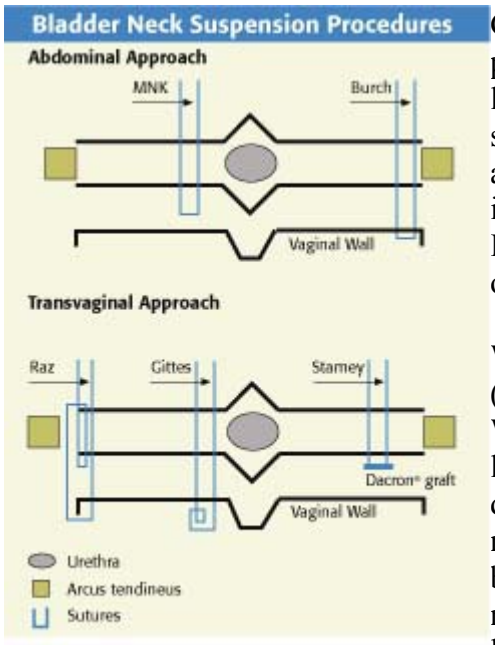

Figure 1: Adapted from Raz S, Stothers L, Chopra A. Raz techniques for anterior vaginal wall repair. In: Raz S (ed). Female urology. 2nd ed. Philadelphia: W. B. Saunders Company, 1996: p. 356; Figure 30-4.

Genuine SUI is the result of weakening of the pubococcygeus musculature, which supports the lower urinary tract. Urethrovesical distortion and subsequent loss of pressure transmission from the abdomen to the pelvis results in urine leakage when intra-abdominal pressure is increased.[2,3] Type I and II refer to the severity of incontinence and degree of bladder descent.[4]

With loss or inefficiency of sphincteric function (ISD), the bladder neck does not fully close. Women with ISD report frequent or constant urine leakage with or without physical activity. The diagnosis of ISD is based on history, symptom report, and urodynamic confirmation of the bladder's inability to store urine. Although nonsurgical intervention is recommended as first-line therapy, many women with SUI or ISD may require surgery for successful elimination of leakage.

Surgical Procedures

Bladder neck suspension is a term used to describe anti-incontinence surgical procedures. Specific suspension procedures are described in Table 1 and illustrated in Figure 1. The purpose of any suspension procedure is to raise and stabilize the bladder and bladder neck in a more anatomically normal position. Stabilization of urethral hypermobility and correction of bladder descent has been shown to be effective in eliminating urine leakage subsequent to increased intra-abdominal pressure.

Bladder Neck Suspension Procedures

PROCEDURE	DESCRIPTION
Marshall-Marchetti-Kranz (MMK)	Uses retropubic approach for vesicourethral suspension. Periurethral tissue is sutured to cartilage of the posterior symphysis pubis.[3]
Burch	A modification of the MMK in which the vaginal wall and

Colposuspension	bladder neck lateral to the urethra are elevated toward Cooper's ligament.[3]
Stamey	Tissues adjacent to the urethra and bladder neck are anchored by suspending sutures to create a sling.[3]
Raz	Modification of the Stamey procedure and the preferred method. Uses the vaginal approach to mobilize the vaginal wall and endopelvic fascia. The sling is anchored to the rectus fascia.[7]
Gittes	Modification of the Stamey and Raz, performed as a no-incision endourethropexy.[9]

Table 1

Stabilization of the urethra and bladder elevation is insufficient to eliminate leakage in women with ISD due to inadequate closure of the bladder neck and lack of coaptation and resistance within the urethra.[4] Surgical procedures to correct ISD use fascial tissue from the patient or synthetic silastic materials to fashion a sling apparatus (Figure 2). Repair of a coexisting rectocele or cystocele should be performed during the bladder neck suspension or sling procedure if possible and not otherwise contraindicated.

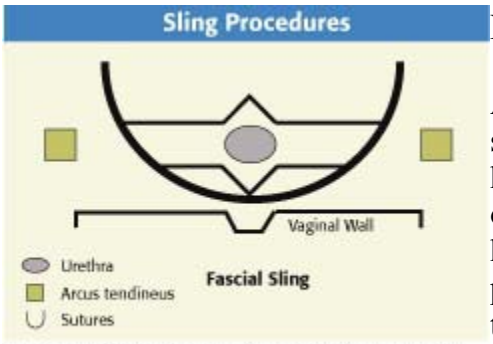

Figure 2: Adapted from Raz S, Stothers L, Chopra A. Raz techniques for anterior vaginal wall repair. In: Raz S (ed). Female urology. 2nd ed. Philadelphia: W. B. Saunders Company, 1996: p. 356; Figure 30-4.

Nursing Care

As with any surgical procedure, anti-incontinence surgery involves certain risks to the patient who has general anesthesia, such as respiratory distress or insufficiency, intraoperative hemorrhage, hypotensive or hypertensive crisis, aspiration, pneumonia, etc. Although these risks are common to all surgical patients and should be considered in preoperative patient education and postoperative nursing care, they are not specific to urologic surgical procedures.

Preoperative Care

During admission, the nurse should obtain a comprehensive patient history, including inquiries about previous bladder or pelvic surgeries or injuries, the presence of varicose veins, and a history of deep vein thrombosis (DVT) or pulmonary embolus.

Patient education reinforces information about surgery and reviews the potential intraoperative risks, postoperative complications, and long-term complications associated with the particular procedure (Table 2). Although intraoperative injuries can and do occur, they are relatively infrequent and should not be over-emphasized.

Potential Complications

COMPLICATION	SYMPTOM/COMMENTS
Urinary tract infection	Increased white blood cell count (WBC), increased temperature, malodorous, urine, bacteruria, dysuria.
Urinary retention	Inability to avoid completely empty the bladder, requiring intermittent catheterization or insertion of indwelling Foley catheter.
Suture abscess	Symptoms of inflammation; increased temperature, purulent drainage, malodorous drainage.
Vescocutaneous Fistula	Urine leakage from the vagina
Hematoma	Decreased red blood cells (RBC); increasing discomfort in or around incisional area.
Detrusor instability	Frequency, urgency, urge incontinence, bladder pain.
Suprapubic pain	Due to swelling and/or surgical manipulation.
Osteopubis	Prolonged suprapubic pain, tenderness, spasm with adduction, febrile temperaure, decreased WBC, increased sedimentation rate.
Ureteral ligation	Hypertension during immediate postorperative period; potential renal loss if uncorrected. This risk is increased if patient has had previous pelvic surgery.
Peritonitis	Complication due to inadvertent puncture or laceration of the bowel. May occur during repair of rectocele or if patient has history of previous pelvic surgeries with concomitant adhesions.

Table 2

Preoperative patient education should outline the most common postoperative complications, such as retention, suprapubic pain, and bladder instability, and emphasize instructions that will facilitate successful patient outcomes.

The nurse should describe the postoperative regimen, give instructions, then ask the patient to demonstrate postoperative repositioning, deep breathing, and incentive

spirometry to prevent pulmonary fluid stasis. The nurse should describe and clearly explain the intraoperative placement of either a Foley or suprapubic catheter, which is usually removed on the first postoperative day.[5]

Prolonged urinary retention is usually managed with intermittent catheterization, unless the patient is unable or unwilling to perform this technique. If long-term urethral catheterization is required, the indwelling Foley catheter should be secured and fastened to the leg with a Velcro and elastic-type holder to create enough slack to prevent meatal movement and irritation that can lead to UTI. Holders to secure indwelling catheters are available commercially.

The patient should be taught self-intermittent catheterization (SIC) before surgery, as knowledge retention of a new skill requires attention and concentration. Short-term urinary retention after catheter removal is related to temporary swelling and surgical manipulation.

The patient should be advised that if spontaneous voiding does not occur by the fourth to fifth postoperative day, she may be discharged with the catheter[6] in place or SIC may be required for an extended period and, as an infrequent, long-term complication of the sling procedure, may be required permanently.

The nurse should inform the patient that vaginal packing may be present after surgery. It is usually removed 24 to 36 hours after surgery.[7]

Failure to achieve the desired surgical result is a potential long-term complication, particularly with prolonged instability or urinary retention that lasts longer than one to two months.

Physical preparation of the patient for surgery depends on the procedure, surgeon's preference, and hospital protocol. Typically, patients will receive prophylactic antibiotics, a Betadine vaginal douche and, if rectocele repair is anticipated, a bowel prep. If the patient has a history of DVT, preoperative heparin may be ordered and administered. Shaving of the perineal area may be a preoperative order or may be performed after the patient arrives in the surgical suite.

Postoperative Care

Postoperative nursing care includes the monitoring of vital signs (Table 3), maintaining strict intake and output records, and frequent assessment of patient status. In the immediate postoperative period, an increase in blood pressure may indicate significant blood loss or unilateral ligation of a ureter. Increased respiratory effort may signal atelectasis. If hypertension is noted, the surgeon should be notified immediately for possible ureter repair.[8]

Postoperative Care

MEASURE	INCREASED	DECREASED
VITAL SIGNS: Temperature	atelectasis; infection	
Blood pressure	ureteral ligation: increased pain/anxiety	Significant blood loss hemorrhage; pulmonary embolus
Respiration	atelectasis; increased pain; pulmonary embolus (dyspnea)	
Pulse	pulmonary embolus	blood loss (weak, thready)

Table 3

Preoperative prophylactic antibiotic therapy is usually continued postoperatively. However, a sustained elevation in temperature may be symptomatic of infection and should be carefully assessed with other clinical signs, such as a change in wound drainage, increase in WBC, and increased suprapubic pain.

Postoperative assessment of pain should include location, duration, and character. Narcotics are effective for incisional pain and bladder spasms can be controlled with anticholinergic medications to prevent detrusor contractions.

Discharge teaching should include a review of SIC and at-home care of an indwelling Foley catheter, if required. If an indwelling catheter is required to manage long-term retention, patients should be taught how to rotate the legband catheter holder periodically to relieve the meatal pressure point and to rotate between alternate legs every 12 to 24 hours.

Patients should be taught the signs and symptoms for urinary tract infection and instructed to notify their physician when they are present. They should be instructed to avoid strenuous activity, heavy lifting, and sexual intercourse for about six weeks.

References

1. Fantl, Newman, Colling et al., Management of acute and chronic urinary incontinence in adults. Guideline Technical Report No. 2 1996 Update. Rockville MD: US Department of Health and Human Services. AHCPR Publication No. 96-0691. March 1996

2. Johnson VY, Gary MA. Urinary incontinence: a review. Journal of Wound Ostomy and Continence Nursing 1995;22(1):8-16.

3. Gray, M. Genitourinary disorders. St. Louis: Mosby-Year Book, Inc., 1992.

4. Raz S, Stothers L, Chopra A. Raz techniques for anterior vaginal wall repair. In S. Raz (ed), Female urology. 2nd ed. Philadelphia: W. B. Saunders Co., 1996: pp. 344-366.

5. Lawson W, Irving F. Perioperative nursing rounds: bladder neck suspension. Canadian Operating Room Nursing Journal 1991;9(2):9-14.

6. Fowler JE, Crowley JL. Stress urinary incontinence: endoscopic suspension of vesical neck. AORN Journal 1987;45(4):922-933.

7. Nagle GM. Genitourinary surgery. In Meeker MH, Rothrock JC (eds). AlexanderÕs care of the patient in surgery. 10th ed. St. Louis: Mosby-Year Book, Inc., 1995: pp. 443-546.

8. Mostwin JL. Complications of incontinence surgery in women. In FF Marshall (ed). Urologic complications: medical and surgical, adult and pediatric. 2nd ed. St. Louis: Mosby-Year Book, Inc., 1990: pp. 338-353.

9. Erickson DR, Sussman EM, & Raz s, Endoscopic urethropexy. In ED Kursh & EJ McGuire (eds). Female Urology, Philadelphia: JB Lippincott Co., 1994: pp. 215-225

Vicki Y. Johnson, RN, PhD, CURN Associate Professor Texas Tech University Health Sciences Center School of Nursing Lubbock, Texas

Vicki Johnson participates in a nursing education program that promotes full-spectrum, individualized nursing care and blends traditional, modern, and technological methods to benefit every patient. Clinically, she assesses patients for rehabilitation and conducts biobehavioral therapy for urinary incontinence and dysfunction with University Urology Associates. She has authored chapters in definitive nursing texts on the primary care of children and adults. Her dissertation focused on pelvic floor muscle adaptation.