

UTIs AND INTERMITTENT CATHETERIZATION: TREATMENT AND PREVENTION

Webcast Outline

SPEAKER: DIANE K. NEWMAN, RNC MSN CRNP

Purpose

To acquaint participants with the relationship between intermittent catheterization (IC) and urinary tract infections. Presentation will discuss the current indications for IC and principles of catheter care. The prevalence of catheter-associated UTIs will be presented. Presentation by faculty experienced in urologic conditions will detail the latest information on intermittent catheterization, catheter-infection treatments and prevention strategies.

Behavioral Objectives:

By the end of the webcast, the participant will be able to:

1. Describe the indications and components related to intermittent catheterization (IC) in both men and women.
2. Identify common complications seen in long term IC.
3. Classify catheter associated urinary tract infections seen in the IC population.
4. Distinguish treatment options for IC associated urinary tract infections.
5. Detail ways to prevent UTIs.
6. List the different types of catheters available for use with CIC.
7. Identify current principles and techniques used in teaching CIC.

Outline

I. Indications

- Urinary retention (acute or chronic)
- Urinary Diversion
- Spinal Cord Injury
- Neurologic Diseases
- Voiding Dysfunction
- Hypotonic bladder
- Urethral Obstruction

II. Components of intermittent catheterization:

- Clean intermittent catheterization (CIC) versus sterile (SIC)

III. Ideal/Successful Candidate for IC

IV. Complications/Problems

- Bacteriuria/UTIs
- Upper tract damage
- Bladder stones
- Prostatitis
- Urethral Problems (urethritis, stricture, creation of a false passage, swelling/epididymitis)
- Pain
- Hematuria

UTIs AND INTERMITTENT CATHETERIZATION: TREATMENT AND PREVENTION

Webcast Outline

V. Associated UTIs

- Usual causes
 - Gender (women)
 - Catheterization volume (>400ml)
 - Previous history of UTIs
- Signs & Symptoms
- Common pathogens (*E-coli*, *Enterococci*, *Staph*)

VI. Treatment Options

- Antibiotic therapy
- Increase catheterization frequency
- Change type of catheter
- Switch to sterile system
- Cost factors

VII. Infection Prevention

- Use of antibiotic suppression, oral antiseptics, cranberry products
- Single-use catheters
- Use of “sterile” self-contained systems
- Catheterization technique
- Bacterial adherence

VIII. Catheter Types

- Design
- Material (Polyvinyl chloride (PVC), red rubber, hydrophilic)
- Catheter length
 - Male (38 cm), Female (20 cm)
- Tip configuration
 - Straight. Coude-tip, Olive tip
- Surface characteristic
 - Hydrophilic. Antibiotic coated

IX. Principles

- Reusable versus single-use
- Frequency/time of day
- Identification of appropriate catheters
- Recording of volumes
- Techniques, lubrication, manipulation
- Catheter size (per age group)
- Catheterization positions (men/women) and available aids

UTIS AND INTERMITTENT CATHETERIZATION: TREATMENT AND PREVENTION

Webcast Outline

References

1. Bennett CJ, Young MN, Razi SS, Adkins R, Diaz F, McCrary A (1997) The effect of urethral introducer tip catheters on the incidence of urinary tract infection outcomes in spinal cord injured patients. *J Urol*. 1997 Aug;158(2):519-21.
2. Bogaert GA, Goeman L, De Ridder D, Wevers M, Ivens J, Schuermans A. (2004) The physical and antimicrobial effects of microwave heating and alcohol immersion on catheters that are reused for clean intermittent catheterisation. *Eur Urol*;46: 641–6.
3. Brosnahan, J, Jull A, Tracy C. (2004) Types of urethral catheters for management of short-term voiding problems in hospitalized patients. *Cochrane Database Syst Rev*; 2.
4. Charbonneau-Smith R. (1993) No-touch catheterization and infection rates in a select spinal cord injured population. *Rehabil Nurs*. Sep-Oct;18(5):296-9, 305.
5. Clarke SA, Samuel M, Boddy SA. (2005) Are prophylactic antibiotics necessary with clean intermittent catheterization? A randomized controlled trial. *J Pediatr Surg*. Mar;40(3):568-71
6. De Ridder, D.J.M.K , Everaert, K. Garcí'a Ferná'ndez, L., Forner Valero, JV., Borau Duran, A., Jauregui Abrisquetaf, ML., Venturag, MG., Rodriguez Sotillo, A (2005) Intermittent Catheterisation with Hydrophilic-Coated Catheters (SpeediCath) Reduces the Risk of Clinical Urinary Tract Infection in Spinal Cord Injured Patients: A Prospective Randomised Parallel Comparative Trial. *European Urology* 48; 991–995.
7. Giannantoni, A., DiStasi, S., Scivoletto, G., Virgili, G. Dolci, S., & Porena, M. (2002) Intermittent catheterization with a prelubricated catheter in spinal cord injured patients: A prospective randomized crossover study. *J Urology*. 166:130-133.
8. Heard, L. and Buhrer, R. (2005) How do we prevent UTI in people who perform intermittent catheterization? *Rehabil Nurs*; Mar-Apr-Oct;30(2):44-45.
9. Lapides J, Diokno AC, Silber SM, Lowe BS. (2002) Clean, intermittent self-catheterization in the treatment of urinary tract disease. 1972. *J Urol*. Apr;167(4):1584-6.
10. Lemke JR, Kasproicz K, Worrall PS. (2005). Intermittent catheterization for patients with a neurogenic bladder: sterile versus clean: using evidence-based practice at the staff nurse level. *J Nurs Care Qual*; Oct-Dec;20(4):302-6
11. Linsenmeyer, TA, Bodner, DR, Creasey, GH, Green, BG, Groah, SL, Joseph, A and the Consortium for Spinal Cord Medicine. (2006) Bladder management for adults with spinal cord injury: a clinical practice guideline for health-care providers. *J Spinal Cord Med*;29(5):527-73.
12. Lynch, D. M. (2004) Cranberry for prevention of urinary tract infections. *American Family Physician*. December, 70, 11: 2175- 2177.
13. Newman, D.K. (2004) Incontinence products and devices for the elderly. *Urologic Nursing*; August 24(4):316-334.
14. Newman, D.K. (2007) *Managing and Treating Urinary Incontinence*, 2nd Edition,;Health Professions Press, Baltimore.
15. Senese, V., Hendricks, MB., Morrison, M., Harris, J, Clinical Practice Guidelines Task Force. Clinical practice guidelines. Care of the patient with an indwelling catheter. (2006) *Urol Nurs*;:26(1):80-81.
16. Stensballe, J, Looms, D., Nielsen, PN, Tvede, M (2005) Hydrophilic-Coated Catheters for Intermittent Catheterisation Reduce Urethral MicroTrauma: A Prospective, Randomised, Participant-Blinded, Crossover Study of Three Different Types of Catheters. *European Urology* 48; 978–983.