PREVENTING AND MANAGING URINARY TRACT INFECTIONS IN SENIORS

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BIG PICTURE ISSUES FOR URINARY TRACT INFECTIONS ("UTI’S")

- Discomfort
- Incontinence
- Mental/Functional Status Changes
- Safety
  - infections
  - treatments
  - falls
DIFFERENCES BETWEEN MEN AND WOMEN

**ANATOMY**

- Men have longer urethra
  - Bladder more protected from contamination
  - Higher risk for retention
- Women have shorter urethra
  - Meatus is closer to anus
- 50-60% of women experience a UTI in their lifetime
- 12% of men
- Women over 85 have a 30% chance of UTI per year
FRONT VIEW OF URINARY TRACT
UPPER VS. LOWER URINARY TRACT

- Lower Urinary Tract Infections are the most common
  - Usually what “UTI” means
  - Produce typical symptoms in younger populations
    - Burning with urination
    - Urgency
    - Frequency
    - Decreased volume per void
    - Cloudy and/or malodorous urine
    - Mental status changes
• Pyelonephritis
• Large blood in urine, especially if clots seen
• Costovertebral angle tenderness (“flank pain”)
• Fever, Nausea, Vomiting
• Feeling very sick
• This is the only remaining portion for urostomy patients
• Urosepsis, shock, death
SINGLE-EPISODE VS. RECURRENT UTI’s

• General prevention strategies for everyone
  • Avoid cross-contamination with stool
  • Drink plenty of water
  • Don’t ignore a full bladder (School teacher’s bladder)
    • NAFC recommends voiding every 2-3 hours
• For folks with frequently recurring UTI’s the above strategies may not work
  • 3 or more within a year = recurrent
AVOIDING CROSS-CONTAMINATION (GENERAL)

- Wipe “front to back”
- Thorough cleansing after BM’s
- Change incontinence products frequently
- Avoid very tight or “thong” underwear
AVOIDING
CROSS-CONTAMINATION WITH CATHETERIZATION

• Foley catheters
  • Insertion technique
  • Preventing traction on tubing
    • Various types of support devices
  • Frequent cleansing of urethral meatus and tubing
    • Soap and water or no-rinse products
    • Cleansing wipes
    • Start at meatus and cleanse in outward direction
    • Alcohol wipe for tubing
    • Remove crusts/mucous
DRINK

“PLENTY” OF WATER

• How much is “plenty”?  
  • NAFC: increase by one or two glasses/day  
  • Voiding every 2-3 hours  
  • Light yellow urine  
    • Less urine odor

• What about other liquids?  
  • Sugar contributes to risk of infection  
  • Bladder irritants  
    • Caffeine  
    • Alcohol  
    • Artificial sweeteners
HOW CAN I ENCOURAGE MORE WATER?

• Encouraging yourself vs encouraging others
• Herbal teas (hot or iced)
• Dilute juice
• Sippy cup
• Straw
• Sport bottle

YOU CAN LEAD A HORSE TO WATER
CRANBERRY PRODUCTS

may make it harder for bacteria to stick to lining of bladder/urethra

- Juice
  - Usually cranberry juice “cocktail”
    - Very little cranberry
    - High fructose corn syrup or sugar
  - “Just Cranberry” juice
    - May be hard to swallow
    - Very acidic
    - Can caused increased frequency and even mild burning with urination
- Extract
  - Pills
  - Capsules
- More recent studies do not support use
RISK FACTORS FOR UTI’S (1 of 2)

- Need for catheterization
  - Indwelling ("Foley Cathether")
  - Intermittent ("straight cath")
- Previous UTI
- Retention (including high post-void residual)
- Age
- Women
• Diabetes - more likely to be asymptomatic
• Immune suppression
• Low estrogen
• MS
• Paralysis
• Neurogenic bladder
• Medications
• Sexual activity/infections
INDWELLING CATHETER

**BENEFITS:**
Controls incontinence
May be only option for urinary retention

**RISKS:**
Infection
Odor
ALTERNATIVES TO INDWELLING CATHETERS

- External (condom) catheter
- Absorptive products
- Increased caregiver help
- Prompted voiding schedule
ENVIRONMENTAL MODIFICATIONS

• Bedside Commode
• Room closer to toilet
• Bell or baby monitor
• Eliminating barriers

• Urinals
  • Portable
  • Installed
• Bidet or “Washlet” toilet seat
• Raised or “lift” toilet seat
SITUATIONAL **RISKS VS BENEFITS** OF INDWELLING CATHETERS

- Retention (non-negotiable)
- Pelvic area wound (may be non-negotiable)
- Incontinence
- Difficulty getting up to void
  - Pain
  - Fatigue
  - Care-giver limitations
  - End-of-life care
REDUCING RISK
FROM INDWELLING CATHETERS (1 to 2)

• Keep collection bag lower than bladder
  • Leg bags
  • Night bags
  • Wheelchair positioning
• Meticulous care of spout/outlet
• Maintain closed system or meticulous cleaning of interchangeable tubing/bags:
  • 1 -2 parts vinegar / 3 parts water. Soak 20 min. Rinse the bag with warm water and hang to dry.
  • Replace monthly
REducing risk

from indwelling catheters (2 to 2)

- Free flow of urine
  - Prevent kinks or loops in tubing
  - Empty bag when 1/3 to 1/2 full
- Catheter stabilization device - reduces traction/manipulation
- Perineal care
- Insertion technique
- Biofilm prevention - “smooth” surface and antimicrobial coatings
- Smaller balloon, thinner catheter
CATHETER STABILIZATION DEVICES
INTERMITTENT CATHETERIZATION
CLOSED-SYSTEM

INTERMITTENT CATHETER
CLOSED-SYSTEM
INTERMITTENT CATHETER
AVOID
URETHAL/BLADDER IRRITANTS

• Scented products
  • Soaps / Bubble bath
  • Laundry products
  • Douches, Feminine hygiene sprays
• Caffeine
• Alcohol
• Artificial sweeteners
• Spicy food
• Notice patterns
PROBIOTICS

- Fermented foods
  - Sauerkraut
  - Miso
- Yogurt, kefir
- Probiotic supplements
DETECTION IN THE ELDERLY (1 OF 2)

- Incontinence, especially sudden onset
- Confusion/disorientation
- Changes in behavior / Delirium
  - Agitation/restlessness/combative
  - Hallucinations
  - Social withdrawal
  - Mistaken for dementia
- Loss of appetite
- Inability to do normal tasks
- Fatigue / weakness
- Change in gait / fall
- Fever -- low grade or absent
DETECTION IN THE ELDERLY (CONT’D)

- Suprapubic pain
- Feelings of general discomfort
- Gross hematuria (large blood in urine)
- Swelling or tenderness of testes or prostate
- Purulent drainage from around the catheter
- Change in character of urine
- Positive urine culture alone is not sufficient
- Elders may not be able to communicate
DETECTION IN PRESENCE OF INDWELLING CATHETER

- Increased leakage
- Bladder spasm
- Urgency
- Pelvic pain, burning sensation in bladder
- Change in character of urine
  - Color
  - Odor
  - Clarity
  - Increased sediment
- Gross hematuria (large blood in urine)
TREATMENT

• Antibiotics
  • Keep a record of ones previously taken
  • Must complete full course of treatment
  • Get culture prior to starting therapy

• Anesthetic agents
  • Less needed in elderly since dysuria (painful urination) less common, less severe
  • May mask severity
  • Discolors urine
RISK OF ANTIBIOTICS

- May be poorly tolerated
  - GI upset
  - Loss of appetite
  - Increased risk for
    - C. Diff
    - Fungal/yeast infections of skin
      - Fungal infections of urinary tract (Candidal UTI)
- Allergic reaction
  - Rash
  - Itching
  - Difficulty breathing
- Development of multidrug-resistant organisms
RISKS OF ANTIBIOTICS - OVERUSE IS COMMON

• Overtreatment of asymptomatic bacteriuria
  • Drug-resistant organisms
  • Risk without benefit
• Rate of asymptomatic bacteriuria increases over time with indwelling catheter use (3-10% per day), reaching 100% with long-term use.
• Pyuria also common in elderly with & without catheters
  • White blood cells or “pus” in urine
  • Up to 90%
CONTINUOUS ANTIBIOTICS PROPHYLAXIS

• Daily
• Several times/week
• Weekly
• Monthly
ACUTE SELF-TREATMENT - “SELF-START” THERAPY

- For patients/caregivers who are knowledgeable, reliable, experienced
- Allows for reduced dose of antibiotics compared to prophylaxis
- Requires collaboration with provider
TOPICAL

ESTROGEN THERAPY

• Correlation with reduced UTI’s (unlike oral estrogen)
• Increases healthy vaginal bacteria
  • Takes at least 3 months
• Reduces pH
• Increased lubrication, blood flow
• Available in creams and time-release rings
IMMUNOTHERAPY - ORAL “VACCINE” DESIGNED TO PREVENT E-COLI INDUCED UTI’S
ALTERNATIVE THERAPIES

• Acupuncture
• Probiotics
• Herbs
• Diet
  • Literature for urostomates reports changes in pH prevent UTI’s
Like pneumonia, UTI can be “the old man’s friend”
Hospice patients offered choice to treat or not
  - Pressuring to increase fluids may reduce quality of life
  - End of life patients may not tolerate fluids
Anyone has right to refuse treatment
Not treating may not result in overall decline
MANAGING

URINARY INCONTINENCE

- Avoid alcohol, coffee, artificial sweeteners, other bladder irritants
- Avoid dehydration -- concentrated urine irritates
- Pelvic floor exercises / biofeedback
- General exercise program with core strengthening
- The “knack”
- “Freeze and squeeze”
- Quick flicks
SKIN PROTECTANTS

- Barrier cream
- Zinc
- Xylex (Petrolatum)
- Crusting technique
- Cyanoacrylate ("Marathon")
INTERNET RESOURCES

Continence-specific resources:

National Association for Continence: https://www.nafc.org/

Find a pelvic health practitioner: https://pelvicguru.com/2016/02/13/find-a-pelvic-health-professional/

Herman & Wallace practitioner directory: https://hermanwallace.com/practitioner-directory. Herman & Wallace is a leading educator for pelvic health practitioners. They maintain a list of providers who have taken their classes.

Incontinence Support Resource Center: http://www.incontinencesupport.info/
GENERAL INTERNET RESOURCES FOR CAREGIVERS

Eldercare Locator: eldercare.gov 800-677-1116. Links to local area agencies on aging that oversees local services.

Family Caregiver Alliance: caregiver.org 800-445-8106. Provides information on topics for caregivers. Family Care Navigator helps find local resources in your area.

National Rehabilitation Information Center: http://www.naric.com/ 800/346-2742 (V) 301/459-5984 (TTY)

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Sarah Herrera

Skin Care – Living with Paralysis
There is much more to know about the skin when living with a spinal cord injury. Read our Spinal Cord Injury Lifestyle Specialist's article about skin care.
Aaron Baker

Video: Air Travel with a Spinal Cord Injury
Aaron Baker, Shield HealthCare's Spinal Cord Injury Lifestyle Specialist, takes on his trip. Learn how to travel with a disability.
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QUESTIONS?