RECURRENT UTIs and CATHETER CARE WHAT YOU NEED TO KNOW

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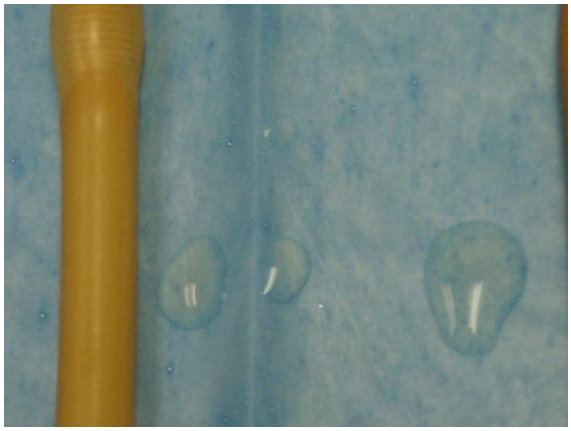
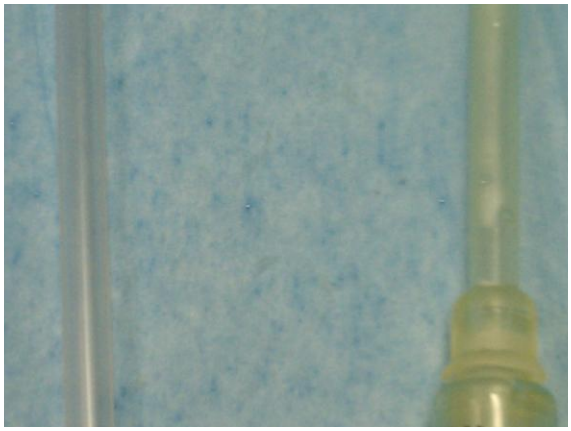
Catheter Care

- Indications for Use
  - Incontinence (ie elderly, dementia)
  - Urinary retention
  - Neurogenic bladder
  - Post operatively

Types of Catheters

- Foley catheters
- Foley catheters – coude tip
- S/P catheters (use regular foley catheter)
- Self catheters
- Condom catheters





CHOOSING A CATHETER (indwelling urethral catheter)

- Male vs female
- Female – usually 16F or 18F
- Male – history of BPH ?
  - Use coude tip catheter
  - Usual rule of thumb: 18F or larger especially if gross blood is present
  - BIGGER IS BETTER FOR BOYS !!!
    - ALLOWS FOR EASIER PASSAGE THROUGH PROSTATIC URETHRA

Tips for catheter insertion

- Male: use lidocaine gel –allow to sit for a minute or so
  - Insert catheter to hub and WAIT for a good urine flow back into the catheter
  - Lidocaine gel may cause a slight delay in return of urine
  - Tape to leg or attach to leg bag with some slack so it isnt pulling on urethra

Tips for catheter insertion

- Females: labial retraction is key to placement
- Lidocaine gel may also be used
- Tape to leg/attach to leg bag with some slack as well.

Guidelines for changes

- Indwelling foley catheters – once/month
  - Obtain urine specimen for CULTURE at time of exchange
  - * if patient has been on an anticholinergic med for bladder spasm advise them not to take prior to catheter removal (ie pyridium, ditropan)
- Suprapubic tubes – every 6-8 wks
  - Obtain urine specimen for CULTURE at time of exchange

Specimen collection

- Clamp the catheter for several minutes allowing excess urine below the clamp to drain into the catheter bag. Remove the catheter from the bag, release the clamp to collect the urine specimen. DO NOT TAKE THE SPECIMEN DIRECTLY FROM THE CATHETER BAG!

Other Patient Considerations

- FLUIDS, FLUIDS, FLUIDS !
- Catheter position
- Leaking catheters – many times due to bladder spasm. Medication is helpful – a bigger catheter usually will not solve the problem.

QUESTIONS ???

Recurrent UTIs

- UTIs acount for 7 million office visits/year
- Cost approximate: $2.5 billion
- Historically early treatments varied but included: chemo, quinine, lead, opium
- Sulfonamides first used in 1937

Common symptoms

- Dysuria – patients will describe quite differently
- Frequent urination – with some urgency as well
- Suprapubic pain or pressure
- Male patients: perineal pain, pressure

UTI classification

- Complicated UTIs
  - Anatomical or functional abnormalities are present
- Uncomplicated UTIs
  - Considered in women with anatomically normal urinary tracts

Evaluation of patient with suspected UTI

- HISTORY: voiding sx, sexual hx, GI hx
- Physical exam: include genital exam and DRE for men
- Urinalysis: dipstick AND microscopic is best
- Urine culture

RECURRENT UTIs

- DEFINITION:
  - 3 OR more **DOCUMENTED** infections in one year OR
  - 2 or more **DOCUMENTED** infections in six months

Evaluation of patients with Recurrent UTIs

- History, Physical exam, UA & urine culture
- Bladder scan if possible
- Referral to Urology

PATHOPHYSIOLGOY OF UTIs

- 80% of bacteria isolated in UTIs are GNR (Enterobacteriaceae)
- Other pathogens include:
  - Pseudomonas aeruginosa
  - Staphylococcus species
  - Enterococcus faecalis

Normal Host Defense Mechanisms

- Low pH
- Normal vaginal, periurethral, perineal flora compete for receptor sites and inhibit the migration of bacteria from rectum to bladder
- Normal periodic voiding pattern keeps bacteria concentration too low for colonization

Patient Factors which alter normal host defense and lead to UTI

- Vaginitis: atrophic, bacterial, candidial
- Urinary retention:neurogenic bladder, BPH
- GI: chronic diarrhea
- Kidney stones
- Bladder stones
- Decreased fluid intake
- TUMORS !!

Anatomical Abnormalities

- Reflux
- BPH
- Ureterocoele
- Bladder diverticulum
- Urethral diverticulum
- Neurogenic bladder
- Fistulas: colovesical, enterovesical
- “Incontinence” - pad use

Imaging Studies & Procedures

- Renal ultrasound
- VCUG
- IVP
- CT-abdomen & pelvis
  - with & without contrast
- CYSTOSCOPY

Treatment Options

- Identify and repair anatomical abnormality
- Lifestyle changes: increase fluid intake, clock voiding, double voiding
- Post menopausal women should also be treated if appropriate with vaginal estrogen
- Women with chronic vaginal problems should be aggressively treated to improve integrity of vaginal tissue
- Antibiotic therapy (see recommendations)

Antibiotic Prophylaxis

- Start AFTER successful treatment and sterile urine has been obtained

- Continuous prophylaxis
  - Low dose antibiotic daily for 3-6 months
  - Good choices: bactrim, macrodantin, proloprim & keflex
- Post coital
  - Single antibiotic dose after intercourse

Case Study

- One of your patients presents with burning with urination and some increased frequency. A clean catch voided specimen is obtained and dipstick reveals:
  - SG 1.030
  - pH 6.0
  - Prot neg
  - Gluc neg
  - Blood 1+
  - Nitrite pos
  - Leukocytes small
  - Do you treat for UTI ?

Case #1 cont'd

- Urine microscopic reveals
  - Squam epith Mod
  - WBC/HPF 2-4
  - RBC/HPF 0-2
  - Bacteria trace
  - Amorphous 1+
  - What do you think now ??? Treat: ???

Case #2

- A 35 yr old female with dysuria, frequency and suprapubic pressure. Clean catch speciment dipstick:
- -SG 1.020
- -pH 7.0
- Prot trace
- Gluc neg
- Blood 1+
- Nitrite pos
- Leuko small

- Treat for UTI ??

Case #2 cont'd

- Urine microscopic :

- -Squam epith Rare
- WBC/HPF 10-12 w/clumps
- RBC/HPF 6-8
- Bacteria 1+

What do you think?? Treat???

QUESTIONS???