

SECTION 2.12
URINARY TRACT INFECTIONS

I. Examination/Diagnosis

- A. History should include documentation of the following:
1. Previous urinary tract infections, urinary tract abnormalities, or previous urinary tract surgery, sexual history.
 2. Presence, onset, severity of the following symptoms:
 - a. Burning on urination, frequency and/or urgency, post-void spasm;
 - b. Hematuria;
 - c. Vaginal irritation, itching, or unusual discharge;
 - d. Lower abdominal cramping or pain;
 - e. Back pain;
 - f. Fever, chills.
- B. A physical exam/lab tests may be performed as indicated and can include:
1. Temperature;
 2. Costovertebral angle (CVA) tenderness;
 3. Speculum examination and appropriate screening tests to rule out vaginitis, gonorrhea, chlamydia, and/or other pathology, which may be the cause of the symptoms;
 4. Bimanual examination to assess the possibility of pelvic inflammatory disease (PID);
 5. Clean catch urinalysis dipstick for protein, blood, leukocytes, and nitrites may be done (See Section 2.13 – Laboratory tests of the Nursing Manual for interpretation of results). Urine culture and sensitivity as indicated.

II. Referral

Patients with any of the following should be referred for a physician evaluation:

- A. Findings consistent with acute pyelonephritis, including a temperature of 101 degrees F. or above;
- B. More than three documented previous urinary tract infections (UTIs) within the past twelve months;
- C. Persistent hematuria after previous treatment for presumed UTI or hematuria in women over the age of 40, without bladder symptoms;
- D. Known urinary tract abnormalities;
- E. Women who are immunocompromised (i.e., HIV, diabetics).

III. Treatment Regimens (Antibiotics and doses listed taken from American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin, Treatment of Urinary Tract Infections in Nonpregnant Women, No. 91, March 2008)

- A. Trimethoprim 160 mg & sulfamethoxazole 800 mg. (Bactrim DS/Septra DS) BID X 3 days; This drug should not be used in pregnancy. **Pregnancy category C. The**

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American Academy of Pediatrics considers TMP/SMX compatible with breastfeeding; however it can increase bilirubin levels in infants less than 2 months old.

- B. Macrobid (nitrofurantoin monohydrate/macrocrystals) 100 mg PO q 12 hours X 7 days. It is safe to use in pregnancy. **Pregnancy category B, contraindicated at term (last 2-4 weeks before delivery). Breastfeeding: Nitrofurantoin has been detected in human breast milk in trace amounts. The American Academy of Pediatrics considers nitrofurantoin compatible with breastfeeding, although there is a theoretical risk of hemolytic anemia in neonates and G-6-PD-deficient infants.**
- C. Ciprofloxacin (Cipro) 250 mg PO BID X 3 days. This drug should not be used in pregnancy. **Pregnancy category C. Not recommended if breastfeeding.**
- D. **Levofloxacin 250 mg. PO once daily for 3 days. Pregnancy category C. Do not use if breastfeeding. Not indicated for pediatric use (under 18 years old).**
- E. **Fosfomycin tromethamine (Monural) 3 gram dose (powder) single dose. For women 18 years old or older. Pregnancy category B. Not recommended if breastfeeding.**
- F. Pyridium (phenazopyridine hydrochloride) 200 mg po tid X 2 days may be used for clients with severe dysuria, post-void spasm, and frequency. **Pregnancy category B. Sold over the counter as Azo-Gesic, Uricalm, Uristat, among others. It is not known if pyridium passes into breast milk.**

IV. Follow-Up After Treatment

- A. If the patient is still symptomatic after 3-7 day treatment, the following options should be considered:
 - 1. Rule out sexually transmitted infections (STIs) and other vaginitis/vaginosis. Treat if indicated.
 - 2. Send urine for culture and sensitivities if not previously done.
 - 3. Refer out for further evaluation, as indicated.
- B. **Follow-Up** of hematuria (>5 RBCs/hpf). If the patient has hematuria after treatment, whether symptomatic or not, she must be referred for further evaluation.

V. Education

- A. Clients shall be provided with a fact sheet on UTIs.
- B. Clients shall be provided with the appropriate medication fact sheet.
- C. Clients should be instructed to contact the clinic or emergency room if symptoms of fever, chills, or increasing pain occur, as these may be symptoms of pyelonephritis.
- D. Clients should be instructed to contact the clinic if she is still experiencing symptoms after finishing her treatment.