

URINARY TRACT INFECTION – MATERNITY CLINICS

I. DEFINITION:

A urinary tract infection is a colonization of bacteria in the normally sterile urine or bacterial invasion of structures in any part of the urinary tract.

II. CLINICAL FEATURES:

Client may be unaware of symptoms or may report urgency, dysuria, hematuria or oliguria.

III. MANAGEMENT PLAN:

A. Laboratory Studies

1. Urine Dipstick
2. Routine urine culture and sensitivity
3. Perform an initial urine culture and sensitivity test on each pregnant woman in order to rule out asymptomatic bacteriuria.
4. Interpretation:
 - a. If urine dipstick performed on clean catch urine indicates infection, (i.e., positive leukocytes, positive nitrites, positive WBC, etc.) contact APRN or OB provider for possible treatment prior to obtaining culture results.
 - b. If urine dipstick is negative for infection, utilize the urine culture FINAL REPORT results in determining need for treatment.
 - c. Since clean catch cultures are typically non-sterile collections, treatment should be based on the number of colonies per ml. Treatment should be initiated if culture reports a colony count of greater than 100,000 per ml for all organisms other than Group B Streptococcus. Group B Streptococcus reported at any level should be treated as indicated in the treatment section.

B. Treatment:

1. For susceptible organisms, with the exception of Group B Streptococcus, treat with one of following:
 - a. **Amoxicillin (or Cephalexin) 500 mg twice daily for 5-7 days**
 - 1) May be used throughout pregnancy
 - 2) Use if Nitrofurantoin is contraindicated AND
 - 3) No history of penicillin allergy
 - 4) Cephalexin requires a prescription from the physician or APRN
 - b. **Macrobid (Nitrofurantoin) 100 mg twice a day for seven days**
 - 1) First trimester use only when organism is **not** susceptible to Amoxicillin, Cephalexin or Fosfomycin.
 - 2) Do **not** give to clients who are:
 - a) at term (≥ 36 weeks)
 - b) have a history of chronic anemia

- c) ethnic groups, such as African-American or Mediterranean origin, with a positive family history of G₆PD deficiency

c. Fosfomycin 3 grams one time in 3-4 ounces of water

- 1) May be used throughout pregnancy
- 2) For clients for whom Amoxicillin is contraindicated and organism is susceptible
- 3) Requires a prescription from the physician or APRN

- 2. For infections with **Group B Streptococcus** identified at any time in pregnant women use:

a. Ampicillin 500 mg orally four times daily for 7 days

- b. Clients unable to take Ampicillin:

- 1) Refer to lab report from urine culture & sensitivity
- 2) Effective antibiotics are listed for organism isolated
- 3) Do not use medications with sulfa during the last trimester of pregnancy

- C. After treatment for a positive urine culture, a repeat culture should be performed in order to assure adequate treatment. Repeat urine cultures may be necessary during the course of prenatal care when a possible urinary tract infection is suspected. See approved order for specific information.
- D. Treatment for urinary tract infection should begin as soon as positive results are known. The maternity health care provider may decide to initiate treatment on the basis of symptoms prior to knowing the results of the urine culture.
- E. Identification of Group B streptococcus in urine should result in proper notification of delivering physician and marking of record in order to assure client is treated appropriately when she presents to her delivering facility in labor.

IV. CLIENT EDUCATION:

- A. Clients should be counseled regarding the need for medication to be completed as instructed.
- B. Teach complications of urinary tract infections and the need for subsequent culture(s) to assure that organisms are no longer present.
- C. Provide written and verbal instruction on use of medication.
- D. Increase oral fluids to at least 8-10 large glasses daily.
- E. Advise emptying bladder after intercourse as a preventive aid for urinary tract infections.
- F. Instruct on good perineal hygiene due to the common causative agents. Special emphasis on always wiping front to back is important.

V. CONSULTATION AND REFERRAL:

- A. Clients who exhibit acute illness such as elevated temperature, costovertebral angle pain, or general malaise, headaches, nausea and vomiting, or chills should be referred immediately for medical evaluation.

- B. Consult with OB provider if any medication listed above is contraindicated for the client.
- C. Consult with OB provider if the final report indicates that the organisms identified are not susceptible to the medications listed above.
- D. Refer all recurrent UTI's to medical consultant.
- E. Mark chart clearly and notify delivering OB provider if Group B Streptococcus identified.

VI. FOLLOW UP:

Client should return to clinic in 2 weeks for evaluation of clinical resolution by the health care provider and for a repeat dipstick UA and urine culture.

REFERENCES:

- ACOG Committee Opinion No. 494: *Sulfonamides, nitrofurantoin, and risk of birth defects* (Obstet Gynecol 2011;117:1484-5)
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- Hawkins, J.W., Roberto-Nichols, D.M., & Stanley-Haney, J.L.(2008). *Guidelines for Nurse Practitioners in Gynecologic Settings* (9th ed.). New York: Springer.
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