

Madigan Army Medical Center

Referral Guidelines

Recurrent UTI's in Women (Recurrent Cystitis)

Diagnosis/Definition

- Cystitis-non specific clinical syndrome usually consisting of suria, urinary frequency, urgency and suprapubic fullness.
- Pyelonephritis-interstitial inflammation caused by bacterial infection. Characteristic symptoms include fever, chills and flank pain.
- Uncomplicated UTI- a urinary tract infection without fever or systemic signs.
- Complicated UTI-a urinary tract infection that involves a fever or presents with systemic signs.
- Recurrent UTI's-
- Reinfection- a recurrent infection that occurs more than two weeks after the completion of treatment, even if the infecting pathogen is the same as the original. When a sterile urine culture is documented between the two UTI's, the recurrence is also classified as a reinfection. Reinfections represent 95% of recurrent UTI's. Reinfection arises from a focus outside the urinary tract.
- Persistent Infection- recurrent UTI in which initial sterilization of the urine is undermined by a relapse with the same organism that was previously eradicated. The recurrent infection usually occurs within two weeks of completing treatment. Persistent infections arise from a focus within the urinary tract.

Initial Diagnosis and Management

- History- It is important to differentiate uncomplicated from complicated infections. Clues that may suggest an increased risk of complicated I include: childhood infections, previous urologic surgery, immunosuppressive condition, or history of nephrolithiasis. Must characterize the pattern of infection, the frequency, symptoms (febrile vs afebrile), temporal relationship to intercourse, contraceptive practices, and relation to the onset of menopause. A detailed culture history summarizing past and present infections must be outlined, as well as prior treatment courses and response.
- Physical Exam-A general physical exam followed by a pelvic exam should be performed. The examiner must look for urethral and vaginal pathology. A catheterized specimen should be obtained at the time the exam.
- Laboratory-Proper urine collection is crucial for accurate evaluation. False positives may occur owing to contamination of the urine specimen with bacteria from vaginal flora (lactobacilli). The presence of multiple organisms in the specimen also suggests contamination. In patients with specimens that appear contaminated a catheterized specimen should be obtained. Significant bacteriuria is defined as 100 colonies/ml in a dysuric patient. Urine cultures should be obtained in all patients who give a history of multiple infections.
- Treatment-An uncomplicated UTI occurring in a normal urinary tract should be treated with empiric antibiotics for a 3-7 day course. Appropriate follow-up of any UTI includes either a urinalysis or culture several days after the completion of therapy. A positive urinalysis at this point probably indicates an unresolved rather than recurrent infection but rapid recurrence may occur. Thus, continued bacteriuria after treatment warrants urine culture, sensitivity testing and a reexamination of antimicrobial therapy.

Ongoing Management and Objectives

- Preventive Strategies
- Contraception-avoid using diaphragms or spermicidal agents
- Post coital voiding
- Cranberry juice
- Topical estrogen for post-menopausal women
- Timed voiding- every three hour while awake
- Treatment strategies for reinfections
- Postcoital prophylaxis-If a relationship between intercourse and the development of a UTI is identified, diaphragm use should be stopped, anti-spermicides containing nonoxynol-9 avoided and postcoital urination encouraged. These behavioral modifications may be accompanied by the administration of a single dose of TMP-SMX, nitrofurantoin, quinolone, cephalosporin or sulfisoxazole after coitus. We recommend a 6 month trial of trimethoprim 100 mg po qd as first line long term prophylaxis prior to specialty referral.
- Long Term Prophylaxis-Consider after all remediable factors have been elucidated and if at least four I's occur within a twelve-month period.
- The goal of antimicrobial prophylaxis is to prevent cystitis by eradicating the uro-pathogenic bacteria that enter the bladder from anatomic reservoirs such as the vaginal introitus and feces. Nighttime therapy with either TMP/SMX, nitrofurantoin, Keflex or a quinolone. Every other night dosing is also effective. Treatment is for 6-12 months. A urinalysis and culture is recommended every three months during therapy. We recommend a 6 month trial of trimethoprim 100 mg po qd as first line long term prophylaxis prior to specialty referral.
- Self-Start Therapy-The patient identifies episodes of infection on the basis of symptoms, submits a urine culture and initiates a standard 3-day course of empiric therapy. Successive negative cultures suggest alternative etiology for the patient's symptoms.

Indications for Specialty Care Referral

- Bacterial persistence-repeat infections with the same species at short intervals
- Repeat infections in a patient with complicated urinary tract
- Isolation of Proteus SP
- Inability to eradicate an infection despite appropriate anti-microbial therapy in compliant patient

Criteria for Return to Primary Care

Resolution or maximal improvement of the symptoms based on anatomic diagnosis or exclusion of define pathology..

Recommended Reading:

Engel JD, Schaeffer J. Evaluation of and antimicrobial therapy for recurrent urinary tract infections in women. Urol Clin 25 (4) Nov 1998.

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Referral Guidelines require review every three years.

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