

interleukin 8 receptor. Pathogenic factors associated with the development of UTI are flagellae, diverse adhesins, siderophores, toxins, polysaccharide coating, and the ability to cause a deleterious inflammatory response.


Patient behaviors that are not associated with UTI include precoital or postcoital voiding patterns, daily beverage consumption, frequency of urination, delayed voiding habits, wiping patterns, tampon use, douching, use of hot tubs, and type of underwear.

TREATMENT

The goal of treatment in uncomplicated UTI is to decrease symptoms and prevent complications. Treatment should be guided by two important principles: the prevalence of resistant genitourinary pathogens in the community and collateral damage to ecologic microbiota (i.e., the risk of propagation of resistant organisms). First-line agents for uncomplicated UTI are nitrofurantoin, trimethoprim-sulfamethoxazole (TMP-SMX), and fosfomycin trometamol; alternative agents are the fluoroquinolones (except moxifloxacin) and the β -lactams (Table 98-1).

Treatment of complicated UTI should be based on culture results and the other comorbidities that are present. Recurrent UTI in sexually active women can be prevented with postcoital TMP-SMX 40/200 mg single dose (if the patient has more than two UTIs per year related to coitus) or with daily, every other day, or weekly antibiotic. If the patient has a UTI

unrelated to coitus or there are fewer than two UTIs per year related to coitus, the prevention of the UTI recurrence can be achieved with patient-initiated therapy. Daily topical application of intravaginal estriol can be helpful in postmenopausal women. After completion of the treatment, urine culture is indicated for pregnant women and on an individualized basis for other patients with complicated UTI.

 For a deeper discussion on this topic, please see Chapter 284, "Approach to the Patient with Urinary Tract Infection," in Goldman-Cecil Medicine, 25th Edition.

SUGGESTED READINGS

- Gupta K, Hooton TM, Naber KG, et al: International clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: a 2010 update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases—executive summary, *Clin Infect Dis* 52:561–564, 2011.
- Gupta K, Trautner B: In the clinic: urinary tract infection [review], *Ann Intern Med* 156:ITC3-1–ITC3-15, quiz ITC-13–ITC-16, 2012.
- Hooton TM: Clinical practice: uncomplicated urinary tract infection [review], *N Engl J Med* 366:1028–1037, 2012.
- Hooton TM, Bradley SF, Cardenas DD, et al: Diagnosis, prevention, and treatment of catheter-associated urinary tract infection in adults: 2009 International Clinical Practice Guidelines from the Infectious Diseases Society of America, *Clin Infect Dis* 50:625–663, 2010.
- Nicolle LE, Bradley S, Colgan R, et al: Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults, *Clin Infect Dis* 40:643–654, 2005.