

Short Article

Treatment Considerations in Urological Tract Infection (UTI)

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Received: 10 September 2018; **Accepted:** 15 September 2018; **Published:** 20 September 2018

Asymptomatic bacteriuria or candiduria is not considered as infection and may be considered as colonization [1]. Do not treat asymptomatic bacteriuria or candiduria with antibiotics unless the patient is pregnant or about to undergo invasion urological procedure. In these cases, asymptomatic bacteriuria or candiduria can develop into symptomatic UTI [1]. Symptomatic UTI defined as those with clinical signs and symptoms listed below as well as verified presence of pathogen by culture, microscopy, dipstick or PCR techniques [1].

Severity of UTI and risks factors for complications along with pathogen virulence and antibiotic availability and side effects can guide antibiotic treatment. Severity of the clinical presentation is the foremost consideration in treatment planning. Accompanied risk factors for each patient may modify the severity of each clinical presentation [1]. Severity of UTI ranges from cystitis, pyelonephritis, urosepsis to uroseptic shock [1]. Mild to moderate pyelonephritis can be treated in an outpatient setting with oral antibiotics while more severe infections with systematic symptoms such as nausea and vomiting require parental therapy and hospitalization. The concept pathogen virulence has garnered discussion of its place in clinical practice however its specific application is unclear [1].

Risk factors such as extra-urogenital (eg pregnancy, uncontrolled diabetes or male gender), urogenital (eg ureteral stone obstruction, transient urinary catheter insertion or well-controlled urogenic bladder disturbances), or neuropathic (eg renal disease) increase the patient's chance for more severe outcomes and may require more aggressive antibiotic treatment [1]. Patients with no known risk factors (eg otherwise healthy premenopausal women) and patients at increased chance of recurrent UTIs with no risk of more severe outcomes (eg hormonal deficiency in menopause and well-controlled diabetes mellitus) require less aggressive antibiotic treatment [1].

Signs and symptoms of cystitis includes: dysuria, frequent or urgent urination, suprapubic pain or tenderness or new onset altered mental status. In patients (ie such in the elderly and patients with spinal cord injury) typical signs and symptoms of cystitis may not be present. In stance, in the elderly with delirium accompanied by bacteriuria and pyuria, the diagnosis of cystitis or pyelonephritis through excluding other causes. Signs and symptoms such as increased spasticity, autonomic dysreflexia and a sense of unease in those with spinal cord injury, which may accompany typical symptoms of cystitis or pyelonephritis [2].

Signs and symptoms catheter associated UTI includes new onset or worsening of fever, rigors, altered mental status, malaise, or lethargy with no other identified cause; flank pain; costovertebral angle tenderness; acute hematuria; pelvic discomfort [2]. In those whose catheters have been removed, dysuria, urgent or frequent urination, or suprapubic pain or tenderness are also signs and symptoms of UTI [2]. If the catheter is in-place dysuria, urgency or frequency of urination are unreliable signs and symptoms.

Signs and symptoms of pyelonephritis includes those of cystitis but also accompanies systemic symptoms such as fever, rigors, altered mental status, flank pain, costovertebral angle tenderness, acute hematuria and pelvic discomfort. Blood and urine cultures should be order with antibiotic susceptibility assessment [3].

The heterogeneity of UTIs requires careful assessment of patient risk factors and presentation to appropriately manage severe infections while avoid unnecessary antibiotic use which can foster the development of antibiotic resistance and healthcare acquired infections.

References

1. Johansen TE, Botto H, Cek M, et al. Critical review of current definitions of urinary tract infections and proposal of an EAU/ESIU classification system. *International journal of antimicrobial agents* 38 (2011): 64-70.
2. 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. *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America* 50 (2010): 625-663.
3. 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. *Clinical infectious diseases: an official publication of the Infectious Diseases Society of America* 52 (2011): e103-e120.

Citation: Ali Elbeddini. Treatment Considerations in Urological Tract Infection (UTI). J Pharm Pharmacol Res 2 (2018): 093-095.



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