TIPS

- STOP: Antibiotics, urinalyses, and urine cultures are not indicated as the initial approach to mental status changes, foul smelling urine, or urine color changes.
- OBSERVE: When such findings are present, increase fluid intake for 24-48 hrs, and monitor the patient’s fluid input/output and vital signs. Seek alternative causes for mental status changes, like dehydration, dementia, medications effects, etc.
- TREAT: Only when patients have clinical findings of UTI (Table 1) and a positive urine culture (≥100,000 cfu/ml).
- Antibiotics of choice for uncomplicated UTIs are short course (3-5 days) nitrofurantoin or trimethoprim-sulfamethoxazole. Avoid fluoroquinolones for uncomplicated UTI unless patient has no other treatment options available.
Clinical Evaluation

Best practice standards say that when there is uncertainty about a UTI in an older adult who lives in a long-term care facility, the correct approach to managing the uncertainty is withholding empiric antibiotic treatment, not ordering urine studies initially, increasing fluid intake, and actively observing the patient for 24-48 hours. At the end of the observation period, symptoms have often resolved and unnecessary antibiotics will have been avoided.

If the clinical picture has not resolved, or if the patient’s condition deteriorates at any time during observation, urine studies can then be obtained. If results of the urine studies are positive and the patient also has clinical findings that meet the definition of UTI (Table 1), antibiotic treatment can be initiated.

Practical implementation of this approach in a long-term care facility depends on updating the facility’s policies and an education campaign aimed at all members of the care team who have direct patient contact. Educating facility residents and their families is equally important, and can be accomplished through the facility’s admission orientation packet and presentations at resident meetings and family nights.

Analogous care in outpatient clinics and office practices should emphasize the same basic approach of withholding antibiotics unless the patient meets criteria for UTI, along with encouraging fluid intake, non-pharmacologic alternatives, (e.g., cranberry juice) and urinary analgesics (e.g., phenazopyridine) for low-grade dysuria symptoms.

Treatment

When a UTI has been diagnosed and treatment is indicated, fluoroquinolones are no longer the drugs of first choice for uncomplicated UTI in non-hospital settings. Current guidelines from professional societies emphasize either nitrofurantoin or trimethoprim-sulfamethoxazole as a first-line drug. Duration of therapy for uncomplicated UTI (cystitis) is now recommended to be 3-5 days. Repeat urine culture as a test of cure is not necessary or recommended.

Evolving Concepts

The approach outlined in this edition of Elder Care is a change from long-standing practice standards. Much of the existing literature discussing UTI in older adults is based on outmoded concepts and clinical definitions that have not been updated as our understanding of the human urinary tract microbiome has evolved.

For example, it was formerly believed that a normal urinary bladder should be free of bacteria and that a colony count of as little as 100 colony-forming unit/ml in a catheterized specimen represented significant bacteriuria calling for treatment. We now know that older adults can be asymptptomatically colonized with one or more organisms in the bladder at colony counts up to or exceeding 100,000. In the past, a finding of two or more organisms in the urine at or near these levels might have been considered a UTI, but now is considered prima facie evidence of asymptomatic colonization because poly-microbial UTIs do not occur. In addition, note that current National Healthcare Safety Network criteria for diagnosing UTI no longer make a distinction between clean-voided and catheter-drawn specimens.

The predominant force generating widespread antimicrobial resistance to antibiotics is antibiotic overuse. Unnecessary antibiotic treatment of the various asymptomatic bacteriuria scenarios that are misinterpreted UTI (Table 2) provides no clinical benefit and only contributes to increased multi-drug resistance. Avoiding over-diagnosis and over-treatment of UTI is an important step in the campaign to preserve the effectiveness of antibiotics - a mainstay of modern healthcare.

References and Resources


