HIGH PREVALENCE OF ASYMPTOMATIC BACTERIURIA
- The bladder is normally colonized in many elderly people.
- A positive urinalysis or culture in the absence of symptoms reveals colonization, which is the presence of bacteria without infection.
- Treatment of asymptomatic bacteriuria is not recommended.

IT'S HARD TO IGNORE A POSITIVE TEST
Habitual Testing + Prevalent Colonization = Unnecessary prescriptions & missing the real diagnosis

UNNECESSARY TREATMENT WITH ANTIBIOTICS HARS PATIENTS
- Drug-drug interactions
- Renal & other complications
- Increase of multi-drug resistant bacteria
- C. difficile infection
- Nausea and vomiting
- Drug allergies

Myth | Fact
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Cloudy or malodorous urine is always diagnostic of a urinary tract infection. | • These changes may be seen in asymptomatic bacteriuria. Other causes can include dehydration, certain medications and diet.
Positive urine culture and abnormal urinalysis (positive nitrates or leukocytes, increased white blood cells or pyuria) always indicates a urinary tract infection and requires antibiotics. | • Positive urine culture and abnormal urinalysis in a resident without symptoms is consistent with asymptomatic bacteriuria – that is, colonization – not infection. Treatment with antibiotics is not indicated.
Positive urine culture in resident with chronic indwelling catheter always indicates a urinary tract infection and requires antibiotics. | • A chronic indwelling catheter is associated with bacteriuria 100% of the time. There is no need to treat unless the resident has symptoms of a UTI.
Elderly residents often have a urinary tract infection with no symptoms except a change in mental status or delirium, or other nonspecific symptoms such as falls. | • Urinary tract infection is much less likely without specific symptoms. Non-specific symptoms, such as a change in mental status, delirium, fatigue, or a fall may be due to a variety of causes, including: pain, depression, constipation, dehydration, poor sleep, or medication side effects.
• It is important to consider a range of possible causes to prevent missing the real diagnosis.
A follow-up urine culture is indicated to confirm successful treatment of UTI. | • Even when a UTI is successfully treated, a urine culture may still be positive due to asymptomatic bacteriuria.

Infection with Resistant Bacteria Increases Risk of Death
Antibiotic-resistant vs. non-resistant Klebsiella bacteria

Using Antibiotics Breeds Resistance in Your Patients and the Community

Number of patients with VRE

Defined daily doses of vancomycin/100 patient days

(JID 1999; 179:163)

Dangers of Unnecessary Antibiotics

Challenges

Strategies for Practice Change

The resident’s family wants a urine test and antibiotic treatment in the setting of asymptomatic bacteriuria.

- Educate the family about the prevalence of asymptomatic bacteriuria, and tell them you do not suspect UTI on clinical grounds.
- Emphasize the dangers of antibiotic overuse.

We’ve always ordered urine cultures for nonspecific problems in residents with dementia.

- There are many potential causes for nonspecific changes in status and thorough evaluation is needed.
- Residents in long-term care frequently have positive urine cultures, even when they are well.

It is okay to give an antibiotic even if it may not be needed. Better safe than sorry.

- Antibiotics can cause adverse drug reactions, C. difficile infection, and promote the emergence of multi-drug resistant organisms. They should not be administered unless clinically indicated.

It is hard to ignore a positive urine test even when done for no clearly apparent reason.

- Treatment decisions should not be made based on test results alone.
- Evaluate the resident clinically and consider a period of observation for development of specific signs or symptoms of a UTI.

Criteria for Urine Testing

Resident without indwelling catheter

- Acute dysuria alone OR
- Fever + at least one of the symptoms below (new or increased) OR
- If no fever, at least two of the symptoms below (new or increased)
  - Gross hematuria
  - Urinary incontinence
  - Urgency
  - Suprapubic pain
  - Costovertebral angle tenderness
  - Frequency

Resident with indwelling catheter

- At least one of the symptoms below (new or increased)
  - Fever
  - Pelvic discomfort
  - Flank pain (back, side pain)
  - Malaise or lethargy no other cause
  - Costovertebral angle (CVA) tenderness
  - Rigors (shaking chills)
  - Delirium
  - Acute hematuria

No symptoms of UTI

- Do not test urine
- Do not treat if a urine test was done by someone else or for “routine”

Weakness, delirium, or fever without a focus

- Individualize care
- Be mindful of the prevalence of asymptomatic bacteriuria
- Seek other causes

Specific UTI symptoms

- Test or treat as usual

* The American Medical Directors Association recommends: “Don’t obtain a urine culture unless there are clear signs and symptoms that localize to the urinary tract.”

** The American Geriatric Society recommends: “Don’t use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present.”

References:

Massachusetts Infection Prevention Partnership
Massachusetts Coalition for the Prevention of Medical Errors, Massachusetts Department of Public Health, Massachusetts Senior Care Association

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