

Symptom-Free Pee: LET IT BE

Myths and Truths about Urinary Tract Infections

MYTH

Cloudy or smelly urine = UTI

TRUTH

Changes in the appearance and/or odour alone should not be used to diagnose a UTI or as an indication for urine culture. Colour, clarity and smell are often affected by diet, certain medications and hydration status. Do not send urine for culture unless resident has symptoms of an infection.

MYTH

Positive test for leukocyte esterase and/or nitrites = UTI

TRUTH

Positive leukocyte esterase and/or nitrites may indicate the presence of white blood cells (WBCs) or bacteria in the urine (bacteriuria), but it does not confirm that there is an infection. Signs and symptoms of UTI are necessary for a diagnosis as pyuria (WBCs in the urine), bacteria and nitrites can also be present in a condition called asymptomatic bacteriuria which is a common colonization state in elderly patients. **Note:** A negative leukocyte esterase and negative nitrite test can rule out UTI in most residents.

MYTH

Pyuria (WBC in urine) = UTI

TRUTH

Pyuria indicates the presence of WBC and inflammation, which are not specific for infection. In addition, the degree of pyuria does not differentiate between asymptomatic bacteriuria and infection. Pyuria and bacteriuria are common in the elderly patients (especially those with indwelling catheters). Do not perform urinalysis unless symptomatic

MYTH

The urine should be sterile, therefore bacteria in the urine = UTI

TRUTH

Bacteriuria is common. Incidence of bacteriuria is common in elderly patients:

- elderly women up to 50%
- elderly men up to 40%
- patients with indwelling catheters - 100% within 2-4 weeks

In elderly patients, bacteriuria without signs and symptoms of infection should not be treated with antibiotics as it represents a colonization state, not an infection.

MYTH

Falls or change in mental status in the elderly = UTI

TRUTH

A fall or a change in mental status in an elderly patient without any other signs and symptoms of infection should be investigated for other causes. The diagnosis of a UTI in this case is a diagnosis of exclusion. Even if urine cultures are positive, in stable elderly patients without any signs and symptoms of UTI, 24 hours of hydration (unless on fluid restriction) can be safely tried before starting an antibiotic.

MYTH

Fever and bacteriuria always indicates a UTI

TRUTH

A fever in a non-catheterized elderly patient, with bacteria in the urine, and with no other signs and symptoms of UTI should be investigated for other sources of infection. The diagnosis of a UTI in this case is a diagnosis of exclusion. Bacteriuria is common, especially in elderly patients and in residents of long term care facilities.

MYTH

Candida or yeast in the urine should be treated

TRUTH

Candida or yeast in the urine often reflects colonization rather than infection. Recent antibiotic use predisposes patients to colonization with Candida. Treatment of Candida or yeast is rarely required and should only be considered if there are obvious signs and symptoms of a UTI and no alternate source is identified.

MYTH

Urine should be sent for culture prior to surgery

TRUTH

Urine cultures for pre-operative patients without signs and/or symptoms of UTI should NOT be sent for screening unless the patient is undergoing an invasive genitourinary procedure.

MYTH

You must treat a UTI for 7-14 days

TRUTH

Cystitis (bladder infection) can be successfully treated with only 7 days of antibiotics in men. Even uncomplicated pyelonephritis (kidney infection) in women can be successfully treated with only 5-7 days of antibiotics. Unnecessarily long durations of treatment increase the risk for adverse effects allergies, drug interactions, gastrointestinal symptoms, *C difficile* infection, yeast infections and alteration of the gut microbiome.

MYTH

You need to repeat urine cultures after treatment

TRUTH

There is no reason to re-culture urine after treatment unless the patient is not improving clinically. Bacteriuria can occur even after effective therapy and is not a reason to prolong therapy in an asymptomatic patient.

References

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Acknowledgements: Christel Johanson, BSc Pharm, ACPR and Craig Lee, MD, FRCPC – The Ottawa Hospital