Diagnosing and Managing Urinary Tract Infections on the Psychiatric Unit

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Introduction: Urinary tract infections (UTIs) are common, especially among female patients. In younger patients, an uncomplicated UTI doesn't normally affect psychiatric symptoms, and you will typically order a urinalysis, initiate antibiotic treatment. In geriatric patients, however, UTIs can cause a variety of psychiatric symptoms, including confusion and agitation. Here we review strategies to diagnose and manage UTIs.

Symptoms

- Typical symptoms: dysuria (pain or burning during urination), urgency, frequency, and abdominal pain.
- Elderly psychiatric patients, especially those with dementia, might present with atypical symptoms like unexplained agitation and confusion. They may not have the capacity to describe their urinary symptoms, making diagnosis more challenging.
- Fever may or may not be present.

Urine Analysis (UA)

- **Typical urinalysis findings** include:
    - Cloudy or odorous urine
    - Positive Leukocyte Esterase: An enzyme found in white blood cells (WBCs); it's a surrogate marker suggesting the presence of pyuria (WBCs in urine).
    - Positive Nitrites: Bacterial conversion of nitrate, which is normally found in urine, to nitrite is a strong indicator of bacterial UTI.
    - Increased WBCs
    - Hematuria: Presence of red blood cells
    - Visible bacteria on microscopic exam
- **Signs of Contamination:** Large numbers of squamous cells and common skin flora (e.g., *Staphylococcus epidermidis* or *Staphylococcus aureus*) suggest contamination. Order a "clean catch" repeat test if necessary.

Urine Culture:

- To identify the causative organism and guide the choice of antibiotic.
- You don't normally need a urine culture for uncomplicated UTIs as they can be treated empirically based on symptoms and UA findings.
- Do obtain urine cultures in these cases: recurrent UTIs, UTIs during pregnancy, and complicated UTIs (e.g., patients with kidney stones or using a urinary catheter).
- Consult medicine to review the findings and initiate treatment if you order a culture.

When is Treatment Necessary?

- As a psychiatric practitioner, you can generally prescribe antibiotics in uncomplicated UTIs. It's best to consult medicine in the following situation:
    - Underlying complex medical conditions
    - Recurrent UTIs
    - When initial treatment fails
- Don't prescribe antibiotics for asymptomatic cases as they don't improve outcomes and may contribute to antibiotic resistance.
- Exceptions include pregnant individuals and confused elderly patients who may not report symptoms accurately.

Management Strategies:

- Nitrofurantoin (Macrobid): 100 mg twice daily for 5 days. Avoid in patients with severe renal impairment.
- Trimethoprim/sulfamethoxazole (TMP-SMX)(Bactrim/Septra): One double-strength tablet twice daily for 3 days.
- Fosfomycin (Monurol): A single dose of 3 grams. Helpful for patients who might have problems with medication adherence.
- Cephalexin (Keflex): 500 mg twice daily for 7 days. Good for patients with sulfa allergies.
- Symptomatic Relief: Phenazopyridine (Pyridium) can be used for dysuria relief but isn't a substitute for antibiotic therapy.
- Monitoring and Follow-Up: Reassess symptoms after 48-72 hours of antibiotic therapy. Consider a post-treatment urine culture in cases of complicated UTIs or persistent symptoms.