URINE – A REVIEW OF THE EVIDENCE

We perform far too many urinalyses and urine cultures, which wastes money and causes issues with follow-up. We also place far too much emphasis on the urinalysis and not enough in the clinical presentation.

Main learning points summarized from the reference.

- CDC 2014 reports suggests antibiotics for UTI was avoidable at least 39% of the time.
- **The majority of women (73% in one study) with lower UTI will be symptom free within 3 days with ibuprofen alone.**
- UTI is a clinical diagnosis, not a laboratory one. It does not require a routine urinalysis or culture as it usually does not change treatment decisions.
    - Dysuria + urinary frequency + **absence** of vaginal discharge/irritation/bleeding equals >90% likelihood of UTI
- If a young woman with a previous UTI states she thinks she has a UTI and does not have vaginal discharge, it is more specific than other tests – she has a UTI.
- Cloudy, smelly urine has a specificity of 96%, but its absence does not rule out UTI
- Positive WBCs **or** nitrites have a 70-80% specificity for UTI and a proper microscopy may increase this by 5%
    - Presence of WBCs and nitrites increases specificity to high 90s but at the expense of sensitivity (i.e. you will miss many UTIs if you require both for dx.)
- Routine urine culture is not required or recommended by the IDSA
    - Order these if worried about antibiotic resistance or atypical UTIs
- Indwelling catheter means a 97% chance there will be WBCs in the urine
- Asymptomatic bacteriuria is very common in all age groups and is often misdiagnosed as UTI. Some believe these bacteria are actually protective.
    - Treating asymptomatic pregnant patients is currently the standard of care, but future guidelines may recommend against this
    - Patients undergoing an invasive urologic procedure should probably be treated
- Treat for 3-5 days generally! We often treat too long.
- Many studies show that there is no difference between midstream clean catch and simply asking the patient to urinate into a container
- None of: wiping direction, voiding post intercourse, nor cranberry juice/supplements have any evidence for efficacy in preventing UTIs.
- Based on Alberta data (2016), a urinalysis with microscopic costs $10 and culture $15.

Conclusions:

1. Order urinalyses like you order any other test. Do not order routinely.
2. Don't base decisions off urinalysis – rely on the clinical picture.
3. Decisions based on urinalysis alone may be missing a more sinister diagnosis.
4. Don't treat asymptomatic bacteriuria (except pregnant patients and for urologic procedures).
5. Don't routinely treat UTIs with Ciprofloxacin.
6. Shorter courses likely to be as effective.

The opinions reflected in this summary are those of the author. I recommend that you listen to the podcast, review the website, and primary literature. This will allow you to better apply the literature to the patient in front of you. First, do no harm.

Reference: https://emergencymedicinecases.com/uti-myths-misconceptions/