Antibiotic Stewardship for Urinary Complaints: Retrospective Review of Urinary Complaints in Healthy, College Aged Students

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Clinical Implications
“Urinary tract infection (UTI) is one of the most common complaints and affected patients present daily in a typical family medicine practice. The patients often present with the classic symptoms of dysuria and increased frequency, but sometimes they are asymptomatic or have a mixed picture. In most cases, an antibiotic is prescribed, and this practice is likely contributing to increasing antibiotic resistance. It is important that clinicians seek to understand local bacterial resistance patterns and properly diagnose and treat UTI if indicated, and recognize their role in antibiotic stewardship.”

Epidemiology
- At least 60% of women have at least one symptomatic UTI during their lifetime.
- Around 10% of women in the US have one or more episodes of symptomatic UTI/year.
- About 25% of these women have spontaneous resolution of symptoms and an equal number become infected.
- Clinical cure can be achieved 25%-42% of women who are not treated.

Learning Objectives:
- How to utilize Antibiotic Stewardship for urinary complaints.
- Recognizing indicators for antibiotic use (number of days of symptoms, number of symptoms).
- Identify best practice for care: (How to interpret Urine Dip, when to use antibiotics).

Limitations:
- Inconsistencies between provider documentation of symptoms and/or urine dip results for data collection.

Data Collection:
- Retrospective review of patients who received a urine dip and presented with a urinary complaint: Review of urine dip and/or Urine Culture results and Antibiotic usage.
- 54 retrospective reviews of urine dip from September 2021 - May 2022.
- 9 cases were excluded from the study for not fitting the criteria for presentation of urinary complaint.

Results:
- 20 students received supportive care appropriately and confirmed negative or below treating standards of 100,000 colonies with urine culture.
- 12 students given antibiotics when supportive care could have been indicated as shown in negative or below 1,000,000 culture results.
- 8 students with antibiotic administration with positive urine cultures.
- 5 students treated with antibiotics with no culture sent.
- 1 student had supportive care that later required antibiotics.

Considerations:
- Creating an algorithm for UTI treatment including number of symptoms, number of days symptomatic and complete UA analysis to determine antibiotic usage.
- Supportive care should be considered when symptoms are present with negative urine reagent test (UA Dip).
- Consider circumstances; i.e. dehydration, spandex, deodorant soaps, etc.
- Do not use Leukocyte as a key determining factor for antibiotic use.

Supportive Care:
- Recommend increase in fluid intake.
- Recommend ibuprofen for pain and anti-inflammatory effects.
- Discourage AZO if not possible.
- Loose fitting clothing and hypoallergenic soaps.

References:
- doi: 10.1097/aog.0b013e318169ffe6
- Does This Woman Have an Acute Uncomplicated Urinary Tract Infection? JAMA. 2002;287(20):2701-2710. doi:10.1001/jama.287.20.2701
- Bleidorn, J., Gagyir, I., Kochen, M. M., Wegscheider, K., & Hummers-Pradier, E. [2010]. Symptomatic treatment (ibuprofen) or antibiotics (ciprofloxacin) for uncomplicated urinary tract infection?: results of a randomized controlled pilot trial. BMC medicine, 8, 30. https://doi.org/10.1186/1741-7015-8-30