Best practice guidelines for uncomplicated urinary tract infections to reduce rates of antibiotic resistance: A CE module

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<td>Conflict of Interest</td>
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Session Goal

- To improve adherence to EBP guidelines for treatment of uncomplicated urinary tract infections in women and to promote antibiotic stewardship.
Objectives

Participants will be able to:

1. Differentiate between complicated and uncomplicated UTIs.

2. Identify differential diagnoses for UTI symptoms.

3. State first-line of treatment for uncomplicated UTIs according to the latest IDSA guidelines.

4. Practice antibiotic stewardship.
Definitions

- Uncomplicated urinary tract infections (UTIs)
- Complicated urinary tract infections
- Interstitial cystitis
Statistics in the US

- UTIs account for 8.6 million visits to PCP offices (Hooton, 2012)
- Total cost for care, $2.4 billion annually (O’Dell, 2011; Barber et al, 2013)
- Prescription medication costs totaled at $218 million (O’Dell)
Symptoms

- Classic UTI symptoms:
  - Dysuria, urinary frequency, urgency, hematuria, odor, suprapubic pain

- STI symptoms:
  - Dysuria, urinary frequency, vaginal discharge (not always), odor
Current trends

- Empiric treatment is common
- Antibiotics remain the standard of care
- Long course of antibiotics (7-10 days)
Pesst! Hey kid! Wanna be a Superbug...?
Stick some of this into your genome...
Even penicillin won't be able to harm you...!

It was on a short-cut through the hospital kitchens that Albert was first approached by a member of the Antibiotic Resistance.
Current Findings

- Patients tend to self-diagnose
- Self medication is not uncommon
- 55% of women are willing to delay antibiotic use.
- Correlation between expectation & prescribing behavior
Misconceptions

- Antibiotics are needed
- Antibiotics “speed up recovery”
- First case of resistance found in 1940s
- Untreated UTIs will become kidney infections
Urine culture & sensitivity

- Is it necessary?
- If so, when?
(+) Urinalysis with a (-) Urine C&S?

- Why?
- What are your considerations?
Other Considerations

- STD: *Chlamydia*
- Anatomical abnormality
- Low colony count ($10^3$ CFU/mL vs $10^5$ CFU/mL)
Appropriate use of antibiotic is defined as “use that maximizes therapeutic effect while minimizing risk of increased resistance” (Nicolle, Anderson, Conly, Mainprize, Meuser, Nickle, Senikas, & Zhanel, 2006, pp. 615).
IDSA (2010/11) Recommendations

- First-line
  - Nitrofurantoin 100mg po bid (x 5 days)
- Alternate therapy
  - TMP/SMX 160/800mg po bid (x3 days)
- In case of resistance or allergy to first-line:
  - Ciprofloxacin 250mg po bid (x3 days)
Summary

- Antibiotic resistance is a global problem
- Practice antibiotic stewardship
- Educate your patients and colleagues
- Use shortest effective course of treatment
“There is the danger that the ignorant man may easily under dose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant.”

Alexander Fleming, Dec. 11, 1945 at the end of his Nobel lecture


References


