ACCOUNTABLE HEALTH PARTNERS

UR MEDICINE

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Pharmacy Pearls

Urinary tract infection treatment options

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Diagnosis	Drug Options	Dose	Duration	Clinical Considerations
Acute simple cystitis* (confined to the bladder) Symptoms: - Dysuria - Urinary frequency - Urinary urgency - Suprapubic pain Common pathogens: *E. coli (majority), Proteus, Klebsiella, S. saprophyticus, enterococci*	**First-Line Empiric Options**			
	Nitrofurantoin (Macrobid)	100 mg twice daily	Females: 5 days¶ Males: 7 days	Activity against some MDR organisms Avoid if: - Concern for pyelonephritis - CrCl <30 mL/min
	Sulfamethoxazole-trimethoprim	160mg/800 mg (1 tablet) twice daily	Females: 3 days¶ Males: 7 days	Do not use if sulfa allergy or ≥ 20% E. coli resistance rate
	Fosfomycin	3 g of powder mixed in water	Single dose¶	Activity against some MDR organisms Avoid if: - Concern for pyelonephritis
	Alternative Empiric Options			
	Amoxicillin-clavulanate	500 mg twice daily	Females: 5-7 days¶ Males: 7 days	Dose based on amoxicillin
	Cefadroxil	500 mg twice daily		
	Cefpodoxime	100 mg twice daily		
	Cephalexin	500 mg twice daily		
	Cefdinir	300 mg twice daily		Does not achieve high urinary concentrations
	Ciprofloxacin	250 mg twice daily	Females: 3 days¶ Males: 5 days	*Quinolones: do not use in children, pregnant patients, those with seizures, neuropathy or QT prolongation risk Do not use moxifloxacin Useful for males with concern for prostatitis
	Levofloxacin	250 mg once daily		
Acute complicated (pyelonephritis) (extension beyond bladder) Symptoms: - +/- cystitis (above) - Fever (>99°F/37.7°C) - Chills, rigors, fatigue or malaise, systemic illness - Flank pain - Pelvic or perineal pain in males Common pathogens: *E. coli, enterococci, Proteus, Klebsiella, Pseudomonas*	**MDR Risk§ – No; Concern for fluoroquinolones – No**			
	Ciprofloxacin	500 mg twice daily	5-7 days	Same as above
	Levofloxacin	750 mg once daily		
	MDR Risk§ – No; Concern for fluoroquinolones – Yes - One dose parenteral agent (Ceftriaxone 1 g IV/IM) followed by one of the following:			
	Trimethoprim-sulfamethoxazole	160 mg/800 mg (1 tablet twice daily	7-10 days	Same as above
	Amoxicillin-clavulanate	875 mg twice daily		Same as above
	Cefpodoxime	200 mg twice daily		
	Cefadroxil	1 gram twice daily		
	MDR Risk§ – Yes - One dose parenteral agent (Ertapenem 1 g IV/IM) followed by one of the following:			
	Ciprofloxacin	500 mg twice daily	5-7 days	Same as above
	Levofloxacin	750 mg daily		

*Patients with urologic abnormalities, immunocompromising conditions, or poorly controlled diabetes are not classified as having complicated UTI without upper tract or systemic symptoms but should be monitored for subtle signs suggesting extensive infection.

¶Longer therapy duration (e.g., 7 days) is recommended for females with urinary tract abnormalities, immunocompromising conditions, or poorly controlled diabetes.

ŶHigher doses of fluoroquinolones (such as ciprofloxacin 500 mg twice daily or levofloxacin 750 mg once daily) typically used.

§Risk factors for MDR gram-negative UTIs include any one of the following in the prior three months:

- An MDR, gram-negative urinary isolate, including a fluoroquinolone-resistant *Pseudomonas* urinary isolate
- Inpatient stay at a health care facility (e.g., hospital, nursing home, long-term acute care facility)
- Use of a fluoroquinolone, TMP-SMX, or broad-spectrum beta-lactam (e.g., third- or later-generation cephalosporin)
- Travel to parts of the world with high rates of MDR organisms