Northwestern Memorial Hospital

SUGGESTED EMPIRIC ANTIMICROBIAL THERAPY BY SITE OF INFECTION

Empiric antimicrobial guidelines are based on the most likely organisms responsible for infection, NMH susceptibilities, and prevalence of resistant organisms. Therapy may need to be adjusted once identification and susceptibility are determined.

Previous antimicrobial therapy may affect the susceptibility of organisms that subsequently cause infection. Close attention should be given to courses of antimicrobial therapy administered to patients in the recent past. In many cases, obtaining the appropriate specimen(s) before antibiotics are started is critical to successful outcomes of an infectious disease. Alterations in empiric antimicrobial therapy may be required.

Anatomic site /diagnosis	Common Pathogens	Preferred therapy	Alternative**	Comments
GENITAL				
Endometritis-Acute postpartum	Group B Streptococcus, anaerobes, Enterobacteriaceae	ampicillin + clindamycin + gentamicin OR ceftriaxone + metronidazole	clindamycin + gentamicin	
Salpingitis/PID	*Neisseria gonorrhoeae*, *Chlamydia trachomatis*, Bacteroides spp., Enterobacteriaceae, Group B Streptococcus. .	Ceftriaxone + metronidazole + doxycycline		Testing for GC and Chlamydia are strongly recommended. Discharge patient on oral doxycycline to complete a 14day course.
				For patients with documented GC or Chlamydia, sexual partners within prior 60 days need medical evaluation and treatment. CDC STI Guidelines

** Severe allergy to Preferred Therapy only

Version Approved by Antimicrobial Subcommittee 7/2/2018

KIDNEY, BLADDER AND PROSTATE				
Asymptomatic bacteriuria	*E. coli* , Enterobacteriaceae,			Should only be treated in **pregnant women** or **patients undergoing urologic procedures with anticipated mucosal bleedin**g --other patients should be evaluated on a case-by-case basis. See IDSA guidelines for asymptomatic bacteriuria: IDSA Asymptomatic Bacteriuria Guidelines
Cystitis	*E. coli* , Enterobacteriaceae, *S. saprophyticus*	nitrofurantoin (if estimated creatinine clearance >30 mL/min); cephalexin or IV cefazolin (reserved for those who are unable to swallow pills	trimethoprim-sulfamethoxazole or ciprofloxacin**	Consider testing urethritis for gonorrhea, chlamydia, and trichomonas. IDSA Uncomplicated Cystitis/Pyelo Guidelines
Complicated UTI/catheters	*E. coli*, Enterobacteriaceae,	cefazolin	May consider alternative therapy based on patient's history of urinary pathogens	See IDSA guidelines for catheter-related UTIs (recommended to d/c or change catheter) IDSA Catheter Assoc UTI Guidelines
Asymptomatic Candiduria (Treat ONLY patients who are at high risk for dissemination, such as neutropenic patients, low birth weight infants <1500 g, and patients who will undergo urologic manipulation)	Candida *spp.*	Remove catheter Neutropenic patients and very low–birth-weight infants should be treated as recommended for candidemia (see below) Patients undergoing urologic procedures should be treated with oral fluconazole, 400 mg (6 mg/kg) daily before and after the procedure		See IDSA guidelines for candidiasis, IDSA Candidiasis Guidelines

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Symptomatic Candiduria	*C. albicans* (and other fluconazole susceptible spp)	Remove catheter, fluconazole		See IDSA guidelines for candidiasis, IDSA Candidiasis Guidelines Micafungin, liposomal Ampho and voriconazole have poor renal excretion and are NOT considered effective against fungal UTI
	Fluconazole-resistant *Candida spp*	Page ID Pharmacist for alternatives		
Pyelonephritis--acute, uncomplicated	*E. coli*, Enterobacteriaceae	Cefazolin	Aztreonam (severe, confirmed beta-lactam allergy)	NMH urinary antibiogram shows similar (>90% susceptibility) of ceftriaxone and cefazolin. Increasing rates of ciprofloxacin- resistance among Enterobacteriaceae have been noted. See IDSA guidelines for uncomplicated UTIs/pyelonephritis, IDSA Uncomplicated Cystitis/Pyelo Guidelines
Pyelonephritis, with sepsis	Enterobacteriaceae,	cefepime +/- amikacin	aztreonam + amikacin +\- vancomycin (severe, confirmed beta-lactam allergy)	Patients at increased risk of enterococcal infections: elderly, urinary obstruction and post instrumentation; septic patients with these risks may benefit from empiric *E. faecalis* coverage (i.e., piperacillin-tazobactam). Also, review prior urinary isolates for antibiotic resistance.
Perinephric abscess	Enterobacteriaceae	piperacillin/tazobactam		Recommend drainage of larger abscesses, may need aspiration for microbiologic diagnosis.

Prostatitis	Enterobacteriaceae	ceftriaxone	trimethoprim-sulfamethoxazole or doxycycline or ciprofloxacin	Review antibiogram and susceptibilities. Note that there have been increasing rates of ciprofloxacin- resistance among Enterobacteriaceae.