

APPENDIX B

PHARMACOLOGICAL INFORMATION: INFECTIOUS DISEASES AND PHARMACOLOGY

Antifungals

Action

Antifungal agents can kill susceptible fungi (fungicidal) or stop growth (fungistatic). Antifungals bind and disrupt the cell membrane of the fungi or alter protein or lipid synthesis within the fungi leading to the therapeutic effects.

Side Effects

CNS: Headache, dizziness

CV: Hypotension, dysrhythmias

GI: Vomiting, abdominal pain

Miscellaneous: Arthralgias, myalgias, peripheral neuropathy, skin exfoliation

Common Medications

Systemic: Amphotericin, Diflucan (fluconazole), itraconazole

Local/topical: Ciclopirox; Lotrimin (clotrimazole); Nizoral (keoconazole); Micatin, Desenex (miconazole); nystatin

Anti-Infectives

Aminoglycosides

Action

Aminoglycosides are used for the treatment or prophylaxis of Gram-negative bacterial infections, including *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Escherichia coli*, *Serratia*, *Acinetobacter*, *Staphylococcus aureus*. Aminoglycosides are bactericidal through inhibition of ribosomal protein synthesis.

Side Effects

GU: Nephrotoxicity

Miscellaneous: Ototoxicity, hypersensitivity reactions

Common Medications

Gentamicin, neomycin, streptomycin, tobramycin

Carbapenems

Action

Carbapenems bind to bacterial cell walls resulting in cell death. These are broad spectrum antibiotics that are active against most Gram-positive infectious agents, including *Streptococcus pneumoniae*, *Enterococcus*, *S aureus*, and Gram-negative infections, including *Pseudomonas aeruginosa*, *Klebsiella*, *E coli*. Imipenem may be combined with cilastatin to decrease renal inactivation of drug.

Side Effects

CNS: Seizures, dizziness

CV: Hypotension

GI: Diarrhea, nausea, vomiting, colitis

Miscellaneous: Anaphylaxis

Common Medications

Primaxin (imipenem/cilastatin)