

AMINGLYCOSIDES – the little “MYCINS”

Used for gram neg bacteria – esp. nosocomial
Streptomycin, tobramycin, gentamicin, karamycin, neomycin
SE: all typical – but watch esp. for OTOTOXICITY and KIDNEY damage
DO NOT MIX GENTAMICIN and HEPARIN! Or mix with penicillins

CARBAPENEMS – the “PENEMs”

Broad spectrum
Ertapenem, imipenem, meropenem
SE: All – esp. diarrhea
Does not mix well with other antibiotics and drugs.

PENICILLINS – the “CILLINS”

1st antibiotics created – variety of uses – ear infections, pneumonia, UTI, STD, prophylactic – but some microbes have become resistant
Penicillin, Amoxicillin, Ampicillin, Nafacillin, Ticarcillin
SE – Watch for all typical SE – N/V/Diarrhea, allergic, sore mouth, furry tongue, superinfections
Do not mix with other drugs
May interfere with oral contraceptives!!

CEPHALOSPORINS -the “CEFs”

Treat Gram + or - depends on the “generation” of the bacteria - are similar to the penicillins
Cefaclor, Cefaroxil, Cefoxin, Ceftazidime, ceftriaxone, cephalexin, Loracabef – (Lorabid)
Watch for allergies to penicillins – are very close and may have cross sensitivity – and KIDNEY damage
All typical SE – N/V/Diarrhea, Allergic/Superinfections
Do not take with antacids.

ANTIBIOTICS

Always assess for allergies before giving any antibiotic!

MACROLIDES – the 4 BIG “MYCINS”

used for Gram + or - - used for a variety of sites of infections – resp, skin, GI, STD
“ACED”
Azithromycin (Zithromax) (take for 3-5 days)
Clarithromycin (Biaxin)
Erthromycin (E-mycin)
Dirithromycin (Dynabac)
Watch for all typical SE – may interfere with numerous drugs and excretion – watch for drug toxicity. May interfere with oral contraceptives

KETOLIDES – NEW

similar to Macrolides – (used only when resistant)
Used for 2nd line of defense for resistant bacteria – esp. Gram + resp infections
Ketex
Watch for all typical SE
May interfere with oral contraceptives

QUINOLONONES / FLUOROQUINOLONONES – the “FLOs”

Affects Gram + and – broad spectrum
Ciprofloxin (Cipro), Levofloxacin (Levaquin), Norfloxacin (Noroxin), Ofloxacin (Floxin)
Watch for all typical SE and Headache, dizziness, photosensitivity, rash
Extreme caution using w. NSAIDS may cause seizures

SULFONOMIDES –the “SULFAs”

_Not really antibiotics – work by inhibiting folic acid in bacteria – death – use mainly in UTI and otitis media (ear infections)
Sulfamethoxazole
Trimethoprim/Sulfamethoxazole (TMP/SMZ, Bactrim, Septra)
Watch for all SE – esp kidney and liver toxicity, photosensitivity. Headache, dizziness, seizures.
Encourage water intake

TETRACYCLINES – the “CYCLINES”

Demeclocycline, Doxycycline, Minocycline, Oxytetracycline, Tetracycline

Watch for liver toxicity, stains teeth, Bone damage, photosensitivity, rash
Take 1 hr before or 2 hr after any dairy products or antacids

GLYCYCLINES – NEW –“CYCLINE”

similar to tetracycline – used esp for skin infections that are resistant including MRSA
Tigecycline
Do NOT use with children – may cause tooth damage and staining – don’t take with dairy
Given IV – watch for all typical SE and toxicity
May interfere with oral contraceptives

MISCELLANEOUS

STREPTOGRAMINS – NEW – the “PRISTINS”

Used for treatment of drug resistant such as MRSA & VRSA – very potent – used ONLY if a bacteria is resistant.
Given IV
Synercid (quinupristin/dafopristin)
Watch for all typical SE and toxicities!

MONOBACTAM - NEW

Aztreonam (Azactam)
Watch for Liver toxicity

VANCOMYCIN

very potent – reserved for resistant gram + bacteria
SE: All- esp watch for kidney damage and ototoxicity

Flagyl – kills bacteria as well as trich. & protozoans – used for intestinal superinfection w. protozoan from antibiotic therapy

Common SIDE EFFECTS of all Anti-Microbials

**THE BIG 3
most common**

Nausea Vomiting Diarrhea

Also GI upset, abd.
cramping

TOXICITY

Hepatotoxicity - LIVER –
monitor Liver Function Tests
(LFTs) and Bilirubin
levels/jaundice

Nephrotoxicity - KIDNEYS –
watch for increased BUN &
Creatinine, decreased urine
output, protein in urine

OTOXICITY – **ear** damage due to
damage of the 8th cranial nerve
– esp aminoglycosides and
vancomycin – ringing in ears,
difficulty hearing

ALLERGIC REACTIONS

Can be mild to severe!
Redness, swelling, rash,
difficulty breathing. Can cause
anaphylactic shock and death.

Assess all patients for allergy to
meds prior to giving and
monitor closely for a period
after first dose for any negative
effects.

**If you suspect an allergic
reaction:**
STOP the antibiotic immediately

Airway, airway, airway – may
need to be intubated or a trach
if can't breathe
Oxygen
Notify physician!
HOB up 45 degrees

Prepare to administer
epinephrine (or Isuprel)
(sympathomimetics)

Prepare to administer
antihistamines, steroids, and
bronchodilators

Miscellaneous:

Photosensitivity – may get sunburned
easily if in sun for any prolonged period
while on the medication

Secondary infections – medication kills
the normal flora that keeps opportunistic
microbes at bay – allowing them to cause
an infection – yeast infections (candida) –
thrush, etc. Often occur at “openings”
such as the mouth, vagina and anal areas

Inflammation/irritation at the site –
especially IV's – may cause
thrombophlebitis. Some po irritate the
mouth

**Be aware – Probenecid interacts with
many antimicrobials** and keeps them from
being excreted which can lead to toxicity.
Check interactions before giving any
antimicrobial with Probenecid