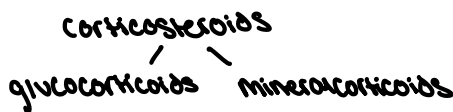


Pharmacology lecture prep

key	- warning	- classification/MoA
	- use/additional use	- administration directions

Classes



Antibiotics

- Gentamicin - kill gram(-) bacteria
can be renal toxic
- Clindamycin
- Amoxicillin
- Enrofloxacin (Baytril) DNA Gyrase inhibitor → DNA can't coil so it gets broken down
blindness in cats
cartilage defects dogs
- Cephalexin 1st gen. cephalosporin
- Cefpodoxime 3rd gen cephalosporin
- Cefovecin (convenia)
- Trimethoprim-Sulfa (TMS) dry-eye
- Doxycycline - tetracycline # use water chaser
inhibit action of bacterial 30S ribosomal unit
- Metronidazole → giardia
- Chloramphenicol bone marrow suppression target 50S subunit

Corticosteroids

- Prednisone
- Prednisolone
- Triamcinolone
- Methylprednisolone

Anaesthetics

- Opioids
- Fentanyl
- Morphine
- Hydromorphone
- Buprenorphine
- Butorphanol can be an antitussive ← cough
- Tramadol

Non-steroid Anti-Inflammatories

- Risk of GI ulceration + liver/kidney damage
- Casprofen (Rimadyl) COX-2 Inhibitor ✓ Bloodwork often
 - Meloxicam (Metacam) mostly COX-2 Inhibitor
 - Ketoprofen Fever reduces
 - Firocoxib (Previcox) COX-2 Inhibitor
 - Deracoxib (Deramaxx) COX-2 Inhibitor
 - Flunixin Meqalumine (Banamine)
 - Phenylbutazone

Anesthetics/Tranquilizers

- Inj
- Ketamine muscle rigidity
 - Tiletamine
 - Valium
 - Propofol Apnea + hypotension
Local anesthetic Voltage-gated Na⁺ Channel blocker
 - Lidocaine/Bupivacaine Channel blocker
 - Dexmedetomidine α₂ agonist
 - Xylazine α₂ agonist
 - Apomorphine can be used as an emetic
 - Thiopental

Cardiac/Blood Pressure

antihypertensives ↓

- Furosemide (Lasix) loop diuretic
- Enalapril ACE-Inhibitor
- Pimobendan inodilator
- Spirolactone
- Amlodipine
- Atropine anticholinergic ↑ HR

Inhalants **hypotension**

- Isoflurane
- Sevoflurane
- Halothane

Anti-Parasitics

general anthelmintic

- Fenbendazole (Panacur)
 coccidia
- Sulfadimethoxine (Albon)
- Pyrantel
 Tapeworm
- Praziquantel
- Selamectin (Revolution)
- Ivermectin (Heartguard)
- Milbemycin (Interceptor)

Gastrointestinal

- Famotidine (Pepcid AC) **H₂ receptor blocker**
- Cimetidine (Tagamet) **gastroprotectant**
- Metoclopramide
 Neurokinin receptor Antagonist
- Maropitant (Cerenia) **antiemetic**
- Cisapride **used to treat megacolon**
- Omeprazole (Prilosec) **Proton Pump Inhibitor**
- Misoprostol **prevents gastric ulceration**

Miscellaneous

- Methocarbamol **muscle relaxant**
- Fluconazole **anti-fungal treating "thrushings"**
- Triptolone **hyperadrenocorticism**
- Levothyroxine **hypothyroidism**
- Methimazole
- Diphenhydramine **anti-histamine**
- Epinephrine
- Guaifenesin **LA anesthetic**
- Pentobarbital **Euthanasia**
- Phenobarbital **anti-seizure**
- Mirtazapine **appetite stimulant**

Mechanism of Action

Cephalosporins: Inhibition of bacterial cell wall peptidoglycan synthesis by inhibition of penicillin-sensitive enzymes (carboxypeptidases)
 of gram positive
 penicillins are part of the beta lactams

Corticosteroids - glucocorticoids: suppress cell-mediated immunity by inhibiting genes that code for cytokines

Opioids: mu agonists acts on G-protein coupled receptors and inhibits Adenylate cyclase
 promotes opening of K⁺ channels + inhibits opening of Ca⁺⁺ channels. ↓ neuronal excitability ↑ K⁺ conductance causing hyperpolarization + relieves pain

Naloxone: reverses Opioids. mu antagonist

Non-steroid Anti-inflammatory: COX Inhibitor. Cyclooxygenase is required to convert arachidonic acid into thromboxanes, prostaglandins, and prostacyclins. The relief from NSAIDs is due to the lack of eicosanoids.

*Some Anesthetics: α_2 agonist - stimulate presynaptic α_2 receptors in CNS, activating inhibitory neurons leading to a reduction in sympathetic output via neg. feedback mechanism

Cardiac: Pimobendan: Inodilator w/ positive inotropic and vasodilator effects.

\downarrow Heart rate. Inotropic effects occur via inhibition of phosphodiesterase

III by increasing intracellular calcium sensitivity in the cardiac contractility apparatus. Cardiac contractility is enhanced without an increase in myocardial oxygen consumption, as pimobendan does not increase intracellular calcium levels.

- cillin beta lactam

beta lactamase \rightarrow clavulanic acid prevents destruction of beta lactams by beta lactamase

Penicillins target gram- anaerobes

MRSA: meth-resistant. S aureus

Aminoglycosides: kill gram(-) bacteria

bacteriostatic: limits/halts spread

bactericidal: kills bacteria

Pigeon Fever: have to drain + irrigate abscess, no antimicrobials used

caused by *Cornibacterium pseudo TB*

