

GI Antiemetic Drugs Vet 405

Drug	Receptor / MOA	Indication	Species	Side effects	Route
Maropitant	Neurokinin 1 (NK-1) receptor antagonist in GIT and vomiting center CTZ Prevents Substance P from binding NK-1	Broad spectrum antiemetic Peripheral and centrally triggered emesis Motion sickness (8mg/kg instead of 2 mg/kg) Pancreatitis and GI disease Drug induced Chemotherapy induced *visceral analgesia	Canine and Feline Extra label in equine and porcine	Decreased appetite, diarrhea Injectable sting Bone marrow suppression in young animals! >8 weeks puppies >16 weeks kittens	Dogs: PO SQ IV Cats: SQ IV
Ondansetron	Serotonergic antagonist (5-HT3) receptor Centrally acting: inhibit serotonin receptors in CTZ	Fairly broad spectrum Peripheral triggered emesis similar to Maropitant but weaker centrally <u>Not</u> effective in motion sickness or vestibular disease Chemotherapy Radiation Parvo Adjunctive for pancreatitis and GI-irritation origin emesis	Extra-label use in canines and felines	Tachycardia, bradycardia RP and QT prolongation on ECG in humans Disrupt GI motility -Constipation or diarrhea	PO IV
Metoclopramide	D2-dopamine receptor antagonist Secondary: 5-HT3 antagonist Tertiary: H1 antagonist *prokinetic effect (5-HT3 agonist)	Close to broad spectrum Stronger peripherally triggered emesis than centrally triggered emesis Weak for motion sickness Chemotherapy Drug, toxin, inflammation Viral enteritis Delayed gastric emptying	More effective in dogs as an antiemetic *cats don't have as many dopamine receptors Horses and livestock: prokinetic and anti-nausea	CNS excitement (extrapyramidal signs) Caution in heart failure (increases aldosterone > edema) Do not use with animals with GI obstructions	IV PO SQ
Phenothiazines (acepromazine, chlorpromazine, prochlorperazine, perphenazine, mepazine,	D2 receptor antagonist Secondary: antihistamine activity Secondary 5-HT3 activity Tertiary: Anticholinergic activity	Broad spectrum Peripherally triggered emesis (stronger) Centrally triggered emesis	Feline Canine Equine	Hypotension (alpha-1 adrenergic receptor blockage) very limited use for this reason - > it dehydrates the patients Sedation	IV PO

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prochlorperazine, triflupromazine)		Weak for motion sickness *Primary use is for motion sickness in cats			
Antihistamines (diphenhydramine, Dimenhydrinate, Cyclizine, Meclizine)	Acts on vestibular apparatus (less so on the emetic center) Anticholinergic and Antihistamine	Narrow spectrum Peripherally triggered emesis: Weak to none Centrally triggered emesis: vestibular disease (inner ear only) Motion sickness (strong) *More effective in dogs than cats	Primarily used in dogs but maropitant may be more beneficial	Mild sedation Paradoxical excitement	PO IV SQ IM