## GASTROINTESTINAL DISEASES OF CATS

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- Signalment and History
- Characterizing Diarrhea
- Differential Diagnoses (Extragastrointestinal vs Gastrointestinal)
- Physical Exam
- Diagnostic Tests
- •Select Treatments

### SIGNALMENT AND HISTORY

- Age
- Inside only vs outside access
- Diet
  - Cat food?
  - Any change in diet?
  - When was it last purchased?
  - Access to any people food?
  - Any predation?
  - Any exposure to toxins (chemicals or plants)?
  - Any habit of chewing/swallowing foreign objects?
- Vomiting only, diarrhea only, or both
- Characterize vomit and/or diarrhea
- How long? Frequency? Any change over time?
- Any other cats (or other pets) showing similar signs?





### CHARACTERIZING DIARRHEA

- Acute (<3 weeks)</li>
- Non-serious
- Small Bowel

• For acute, non-serious diarrheatreat with symptomatic care

- Chronic (>3 weeks)
- Serious (>10% loss of body weight, 3-5% dehydration, hemorrhagic diarrhea, electrolyte disturbances, T>104 F)
- Large Bowel

- Treatment trial for acute, non-serious vomiting/diarrhea
  - Fenbendazole (nematodes and Giardia) 25 mg/kg po SID for 5 day, repeat in 2-3 weeks
  - Metronidazole (anerobic antimicrobial, antiprotozoal, some anti-inflammatory benefit) 25 mg/kg/day (for diarrhea)
  - Highly digestible diet
  - Antiemetic (if needed)- maropitant 2 mg/kg SID
  - Anti-diarrheal agent (if needed)- loperamide 0.08-0.16 mg/kg PO BID







### SMALL BOWEL VERSUS LARGE BOWEL DIARRHEA

#### Parameter

Frequency Volume Blood Mucus

Straining

Urgency

Weight Loss

#### **Small Bowel**

2-3 times normal
Increased
Melena
Absent
Absent
Normal or Increased
Common

#### Large Bowel

>5 times normal Normal or Decreased Frank

+/- Present

Present

Increased

Occasional



#### SMALL BOWEL VERSUS LARGE BOWEL DIARRHEA

#### Parameter

Borborygmus Flatulence Vomiting Appetite Albumin Globulin Cholesterol

#### **Small Bowel**

Yes Yes Yes Variable Normal to decreased Normal to decreased Large Bowel

No No

Infrequently

Unaffected

Normal

Normal

Normal

#### DIFFERENTIAL DIAGNOSIS (EXTRAGASTROINTESTINAL)

- Renal Failure
- Hyperthyroidism
- Hepatic disease
- Pancreatitis
- Complicated Diabetes
- Neoplasia
- FIV/FeLV related disease

#### DIFFERENTIAL DIAGNOSIS (GASTROINTESTINAL) Diarrhea

#### Vomiting

- Parasites
- Food allergy or intolerance
- Inflammatory Bowel Disease (IBD)
- Intestinal lymphoma (small cell vs large cell) or other GI neoplasia
- Toxins
- Helicobacter
- Obstruction (foreign body, neoplasia, intussusception, stricture)
- Constipation

- Parasites
- Food allergy or intolerance
- Inflammatory Bowel Disease (IBD)
- Intestinal lymphoma (small cell vs large cell), or other GI neoplasia
- Toxins
- Salmonella, Campylobacter
- Feline Panleukopenia (FPV)
- Exocrine Pancreatic Insufficiency (EPI)

#### PHYSICAL EXAM

- Look under the tongue for a string (foreign body as cause of vomiting)
- Palpate thyroid
- Palpate for intestinal thickness, mass, or foreign body



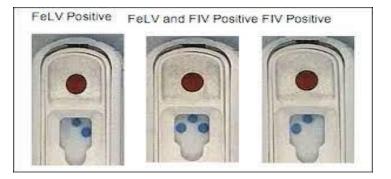




### DIAGNOSTIC TESTS (EXTRAGASTROINTESTINAL)

- FIV/FeLV test
- Complete Blood Count (CBC)
- Chemistry Panel with T4
- Spec fPL
- Urinalysis
- Ultrasound
- Radiogrphs





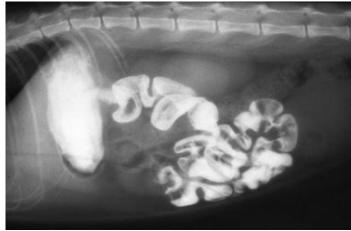
#### EXPECTED RESULTS

- Renal Failure (decreased USG, increased SDMA, CR, BUN, electrolyte disorders, anemia)
- Hyperthyroidism (increased total T4, ALT, ALP)
- Hepatic disease (hyperbilirubinemia, decreased BUN, increased ALT, ALT and GGT, bilirubinuria)
- Pancreatitis (Increased fPL, ALT, ALP, leukocytosis, anemia, changes on ultrasound)
- Complicated Diabetes (glucosemia, glucosuria, ketonuria, electrolyte disorders)
- Neoplasia- palpation, radiographs, ultrasound
- FIV/FeLV related disease (FeLV antigen positive or FIV antibody positive)

### DIAGNOSTIC TESTS (GASTROINTESTINAL)

- Fecal (roundworms, hookworms, whipworms, coccidia)
- Cryptosporidium/Giardia
- Fecal culture (Salmonella, Campylobacter)
- FPV antigen test (and CBC-leukopenia)
- Elimination diet trial for food allergy (hydrolyzed vs novel protein)
- GI Panel (TLI, cobalamin, folate)
- Radiographs (+/- barium contrast) for foreign body or larger masses
- Ultrasound (intestinal thickness, gastrointestinal nodules/masse)
- Endoscope for suspected gastric foreign body (+/- removal) or gastric biopsy (Helicobacter)
- Gastrointestinal biopsies for IBD and lymphoma, Helicobacter (other neoplasia)
  - Endoscopic-partial thickness
  - Surgical-full thickness





- ALWAYS DEWORM!
- Hookworms, roundworms, physaloptera
  - Fenbendazole 25 mg/kg PO for 3 days, repeat in 2-3 weeks
  - Pyrantel pamoate 20 mg/kg PO, repeat in 2-3 weeks
- Coccidia- sulfadimethoxine 50 mg/kg PO SID for 2-3 weeks
- Cryptosporidium-tylosin 20-40 mg/kg PO BID







- Giardia- fenbendazole 25 mg/kg PO SID for 5 days or metronidazole 25 mg/kg PO SID for 5 days
- Salmonella, Campylobacter-enrofloxacin 5 mg/kg PO SID for 7-10 days,
- Helicobacter (treat for 3 weeks)
  - Antiacid-famotidine 0.5 mg/kg PO BID
  - And any two of the following- amoxicillin (20 mg/kg PO BID), bismuth subsalicylate (5 mg/kg PO BID), doxycycline (5 mg/kg PO BID), metronidazole (12.5 mg/kg PO BID)









- Feline Panleukopenia
  - Isolate
  - IV fluids
  - Broad spectrum antibiotic (amoxicillin/clavulanic acid)
  - Highly digestible diet







• Food allergy-hydrolyzed or novel protein diet and NOTHING else







- Exocrine pancreatic insufficiency (rare)- pancreatic enzymes and cobalamin if needed
- Foreign body- endoscopic or surgical removal (cut string under tongue if present)



#### • IBD

- Novel protein diet or hydrolyzed protein diet
- Prednisolone
  - 1-3 mg/kg/day to begin (may need subcutaneous dexamethasone if not being absorbed)
  - Once clinical signs improve, taper every 3-4 weeks
  - Maintain at lowest effective dose
- Cobalamin supplementation if needed- 250 mcg SC weekly for 6 weeks (then retest)







- Intestinal small cell lymphoma
  - Cyclophosphamide 25 mg tablet PO every 3 weeks- check CBC (can cause myelosuppression) prior to each dose for 3 times and then every 4-6 months
  - Prednisolone 5mg- 1/2 tablet PO every other day
  - Cobalamin supplementation if needed 250 mcg SC weekly for 6 weeks (then retest)







# QUESTIONS?