Equine Colic

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What is “Colic”?
What is colic?

Colic is a clinical sign, not a diagnosis per se

- “Colic” refers to clinical signs resulting from abdominal pain
- There are many types or causes of “colic”
Anatomy of Colic
GI Anatomy

Mouth --> Esophagus --> Stomach --> Small Intestine (Duodenum, Jejunum, Ileum) -->

Stomach can hold 8-10 L normally
GI Anatomy

Mouth --> Esophagus --> 
Stomach --> Small Intestine (Duodenum, Jejunum, Ileum) --> 
Cecum -->

Cecum is 4-5 long and can hold 25-30 L of digestive material
GI Anatomy

Mouth --> Esophagus --> Stomach --> Small Intestine (Duodenum, Jejunum, Ileum) --> Cecum --> Large Colon (Right ventral colon --> sternal flexure --> left ventral colon --> pelvic flexure --> left dorsal colon --> right dorsal colon --> transverse colon) -->

- About 12 ft long
- Pelvic flexure is the most common site of impaction
- Left dorsal and ventral colon have no attachment to body wall
- Right Dorsal colon location of “colitis”
GI Anatomy

Mouth -> Esophagus -> Stomach -> Small Intestine (Duodenum, Jejunum, Ileum) -> Cecum -> Large Colon -> Small Colon -> Rectum

Small Colon is about 10 ft long
- Can also get impacted
Rectum about 1 ft long
Signs of Colic

- Quiet attitude*
- Inappetance*
- Pawing
- Parking/stretching out
- Flank watching
- Flehmen response
- Laying down
- Rolling repeatedly
What to do

- Call your veterinarian
  - Be ready with horse’s name, age, signs, brief history
  - Pulse, temperature, and mucous membrane color helpful too
- Remove all food but leave water available
- Walk the horse
  - Can help with spasmodic colics or impactions
  - Don’t get hurt! Get out of the way if horse is violent/thrashing
The Colic Exam

- Physical exam
  - TPR
  - Gut sounds
  - Mucous membranes: hydration, cardiovascular status

- Analgesics +/- sedation
  - Banamine (flunixin meglumine)
  - Xylazine, Detomidine (alpha-2 sedatives) or butorphanol (opioid sedative)
    - Also have analgesic effects

- Rectal Exam

- Nasogastric tube
Rectal exam
Nasogastric Tube

Checking for reflux

- Normal horse <2 L net reflux retrievable
- Excess reflux indicative of small intestine disease or very severe impaction
- Also therapeutic - administer water +/- epsom salts, electrolytes, or mineral oil
Treatment

- 80+% of colics will resolve with medical treatment

- Walking, time
- Banamine +/- further analgesics
- Fluids- NG tube and/or IV fluids
- +/- Gastrogard (gastric ulcers)
Aftercare

- Withhold food 12-24 hours
- Handwalk every 2-3 hours
- Monitor fecal output, attitude, interest in food
- Gradually re-introduce food over several days
- → Address underlying cause
Referral

Referral to a hospital is recommended if:

- Persistent pain/colic signs
- Severe pain (thrashing, HR > 80)
- Significant reflux from NG tube
- Abnormal rectal exam findings (displacement,
Referral

- Have trailer ready; get phone number for clinic
  - Call to let them know you are coming
- Ask for estimate

What to expect:

- May repeat or perform more diagnostics:
  - Rectal, NG tube, ultrasound, bloodwork, “belly tap”
- Will decide if medical (IV fluids and monitoring) or surgical
Colic Surgery

- Large Colon Volvulus
- Small Intestinal Strangulation
  - Strangulating Lipoma
  - Mesenteric Rent
- Impactions*
  - Especially small colon
- Displacements*
  - Right Dorsal Displacement
  - Nephrosplenic Entrapment/Left Dorsal Displacement
Causes/Types of Colic

● Most common: “Spasmodic Colic” or “Gas colic”
  ○ Typically resolves with walking and banamine

● Other common types:
  ○ Impaction colics
    ■ Pelvic flexure
    ■ Cecal impaction
    ■ Small colon impaction
  ○ Gastric ulcers
  ○ Left Dorsal Displacement
  ○ Strangulating Lipomas
  ○ Large Colon or Cecal Volvulus
Gas Colic

Aka “vagotonia” or “spasmodic colic”

- Most common type of colic
- Signs: moderate colic signs, painful but responds well to banamine, walking, and time
- Cause: Sudden changes in feed, stress, weather, spoiled feed, frozen grass, overeating
- Treatment: Banamine, handwalking, hold off feed for 12-24 hours
Gastric Ulcers

- Irritation to the mucosal lining of the stomach
  - Horses have a non-glandular and glandular portion- ulcers most common on non-glandular portion
- Causes:
  - High grain, low forage diet
  - Stress- travel, new environment, high workload
  - Long periods of fasting
- Signs: colic signs after eating, prefers roughage to grain diet, weight loss, change in behavior or irritability
• Diagnosis: Gastroscopy

• Treatment/Prevention: Gastrogard (Omeprazole) +/- sucralfate
Anterior Enteritis

- Unknown cause (potentially bacteria, viral, or parasite associated)
- Small intestines distended with fluid (ileus, hypersecretion) and stomach fills with back-up fluid
- Signs: moderate to severe colic signs, fever
- REFER (60-80% success rate at hospital)
  - IV fluids, banamine, metoclopramide/lidocaine
  - anti-endotoxin medications
Strangulating Lipoma

• Middle aged to older horses
  ○ esp gelding
  ○ Esp Arabs, Quarter Horses

• Fatty benign tumor on a stalk that wraps around small intestines

• Surgery required (may or may not need to resect compromised intestines)
Intussusception

- Associated with Anoplocephala perfoliata (deworm regularly), young horses (<3yo)
- Intestine telescopes into another part of the intestine
- Signs: acute or chronic colic, poor history of deworming
- Treatment: surgery (challenging cases depend on chronicity)
Large Colon Impactions

- Most common after gas colics
- Older horse, poor teeth, stall rested horse, insufficient water intake
- Medical vs Surgical impactions (comfort level of horse, changes in bloodwork/abdominocentesis, physical exam parameters)
- Medical: oral and IV fluids, Banamine, MagSulfate (Epsom salts), oil
- Surgical: enterotomy
- Prevent: make sure horse is drinking water, have teeth floated regularly
Displacements - Nephrosplenic

- Higher risk: warmbloods, yearling TBs
- Mild to moderate colic signs
- Large colon moves between the spleen and kidney (rectal, ultrasound)
- Medical - phenylephrine contracts spleen allows colon to return to normal position (not recommended in horses >15 yo → fatal hemorrhage) or rolling horse clockwise
- Surgical - replace entrapped intestines
  - Reoccurrence 8-10% → surgically close the NS space
  - Prevention → small, frequent meals
Colon Volvulus

- Mare post-foaling, generally TB mares, older horses with poor dentition
- **Severe** colic signs- due to U shaped colon twisting around itself cutting off blood flow and ingesta movement
- Prevent: routine dentals and deworming
- REFER → Surgery required for replacing torsion
  - resection of unviable colon due to poor blood perfusion
Colitis-Potomac Horse Fever

- Signs: mild colic, diarrhea, fever, inappetence
- Ingesting the fly infected by the Ehrlichia bacteria
- Prevention: vaccinate, turn off lights at night, clean water buckets
- Treatment: best to refer for IV fluids, oxytetracycline, anti-endotoxic medications
Colitis – Right Dorsal Colitis

- History of chronic NSAID use (bute, banamine)
- Inflamed and edematous part of the colon- ultrasound (>0.4cm thicknss)
- Prevention- avoid long-term or high doses of NSAIDS (Bute, Banamine), use COX 2 selective NSAIDs (firocoxib, “equioxx”)
- Treatment- change diet (grain based to decrease load on colon), IV fluids, supportive therapy; referral often recommended
Preventing Colics

- Feed multiple small meals rather than single large ones
- Avoid sudden changes in feed type or amount
- Good hydration
  - Warm water available in winter
  - Plenty of cool, clean water available in summer
- Feed more roughage vs concentrates
  - <5 lbs grain per meal
- Maintain good overall health
  - Body condition score 5/9
  - Frequent dental exams
  - Appropriate deworming
Thank you!

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