

# Colic In The Horse

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# Colic: The Big Picture

Remember colic is abdominal pain—a symptom of a disease not a disease

## ▶ GI disease

- Horses are herbivores—made to eat forage all the time
- A poorly designed system?
- Monogastric—3–5 gallons
- Cannot vomit—sharp angle where esophagus meets stomach and with strong esophageal sphincter
- SI digest starch, protein, fat
- Caecum—fermenting pot—digest fiber
- large colon—digest fiber—Volatile FA—
- Small colon—make fecal balls



## ▶ Non GI disease (keeping an open mind)

# Horses are not cows



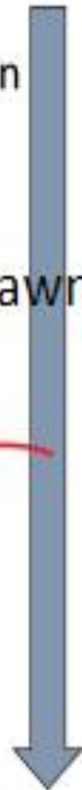
- ▶ Passing a tube: nasogastric intubation in horse
- ▶ Sensitivity to infection—very delicate—
- ▶ Number of compartments to the stomach—1:4
- ▶ Temperament
- ▶ Horse require more maintenance to keep alive—expensive
- ▶ Horses need cleaner feed

# What Does Colic Look Like in the Horse?

## Signs of Colic

- Loss of appetite
- Rubbing rump or "sitting" on ledges, buckets, etc.
- Laying down more
- Flehmen response And yawn
- Stretching out (like when urinating)
- Looking at flank
- Pawing
- Kicking at flank
- Rolling

Severity



great photos at  
DigartDesign.com

# What does Colic look like in the foal?

- ▶ Lay on back
- ▶ Playing at udder without nursing
- ▶ Gastric ulcers may rupture in foals
  
- ▶ Foals <1 week old
  - Meconium impactions
  - Bladder rupture



# Making a diagnosis

- ▶ What you want to know...history...–owners observations
- ▶ Physical Examination
- ▶ Rectal examination
- ▶ Nasogastric intubation
- ▶ Ultrasound
- ▶ Peritoneal tap
- ▶ Blood test
- ▶ Response to treatment...
- ▶ The most common reason for surgery/referral...
  - PAIN NOT RESPONSIVE TO MEDICATION



# Colic Examination

- ▶ Physical Examination



- ▶ Rectal Examination



# Other Diagnostic Tools: Ultra sound and/or Peritoneal Tap

▶ Ultrasound Evaluation

▶ Dialated Small intestine





# Treatment: Injectables



## ▶ Analgesics

***Flunixin Meglumine***: .25–1.1 mg/kg iv  
**NEVER IM** or orally( 50mg/ml)–analgesia  
for visceral pain; anti–endotoxic at low  
dose; NSAID

## ▶ Sedatives

***Detomidine***; 10 mg/ml .02–.04mg/kg IV  
IM–often as low as .01mg/kg\*

Analgesia and sedation–can slow  
gut; alfa 2 agonist

***Xylazine***–1.1 mg/kg iv 2.2/kg IM  
Butorphanol–.1 mg/kg but I always use  
with another agent so much lower at .02–  
.05mg/kg–high dose causes excitement  
/head pressing; opioid agonist

## ▶ Antispasmodic–

***Hycoscine butylbromide***/ Buscospan; .3  
mg /Kg IV–

## Other analgesics

- ▶ Phenybutazone
- ▶ Firocoxib–Equioxx
- ▶ Ketaprofen
- ▶ Meloxicam
- ▶ Dipyron–poor analgesia
- ▶ Diclofenac?

## Other sedatives

- ▶ Acepromazine–no analgesia
- ▶ And lowers blood pressure
- ▶ Romifidine

## Other Antispasmodics

Atropine–decreases motility

Do not use for colic

Relaxes intestinal wall



# Treatment: Laxatives

- ▶ Mineral Oil—soften feces
- ▶ Osmotic Laxatives—magnesium sulphate—1 pound in gallon of water
- ▶ Psyllium Hydrophilic mucilloid—bulk-forming absorb water—useful for sand colic
- ▶ Diocetyl Sodium—DSS Succinate—careful may irritate mucosa—not use
- ▶ Intravenous and enteral Fluids



# GI causes of pain: When the gut hurts

- ▶ Intestinal Dysfunction
    - Distention (gas, fluid, feed)
    - Impactions
    - Spasmodic gas colic
  - ▶ Intestinal Accidents
    - Displacements – A poorly designed system!
    - Strangulated/dying intestine
  - ▶ Gastric ulcers
  - ▶ Colon Ulcers
  - ▶ Inflammation
- Diarrhea?  
Fever?
- ▶ Enteritis



# Inciting causes of GI pain:

## INTESTINAL DYSFUNCTION

Mild Gas Distention:

Spasmodic gas colic:

Impactions:

- Feces–constipation
- Feed (poor dentition may be contributing factor)
- Sand
- Gravel
- Worms!!! Ascarids

Possible causes:

- lack of water/drinking too much water
- stress/changes in exercise
- Lack of deworming or parasite resistance
- Dietary changes
- Unclean food

◦ **TREATMENT**

: Banamine;

anti–spasmodics (Buscopan)

laxative therapy via NGT

Usually respond to medical TXT

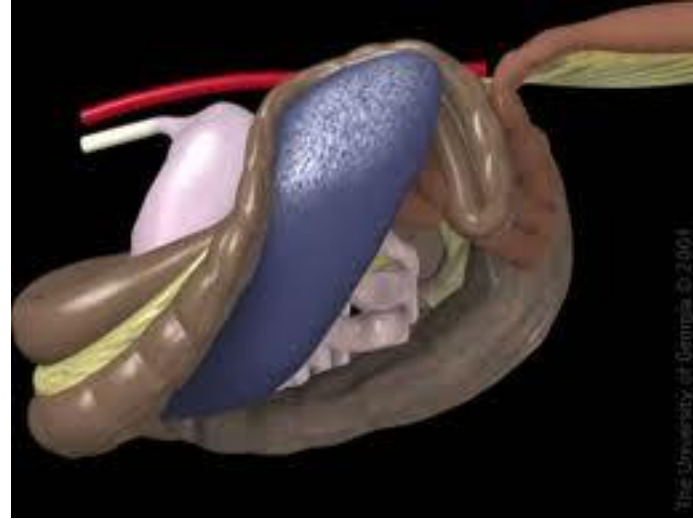


# Inciting causes of GI pain

## INTESTINAL ACCIDENT

- ▶ Displacement
    - Simple displacement: left and right
    - Take feed away and exercise...surgery
    - Nephrosplenic entrapment ( surgery or phenylephrine administration)
  - ▶ Strangulated intestine (lost blood supply)
    - Large intestine
    - Large Colon Volvulus
    - Small intestine
    - Surgical resection: poorer prognosis
    - Time is important!
- Enterolith or other Benzoars–intraluminal mass in GI tract

# Large intestinal displacement



# Strangulating lesions

- ▶ Small intestine strangulating lesion



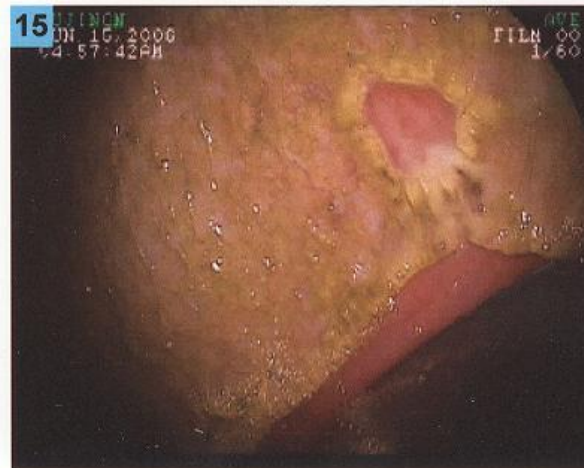
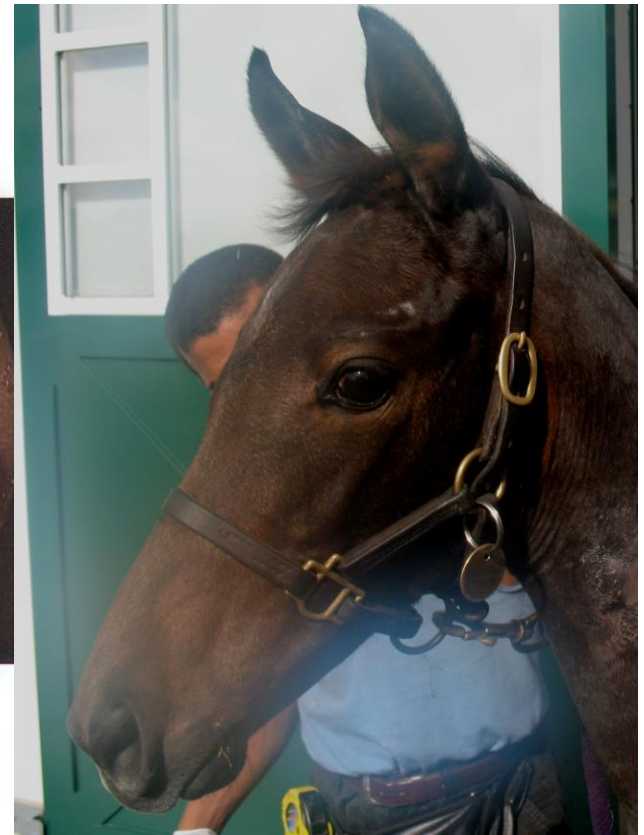
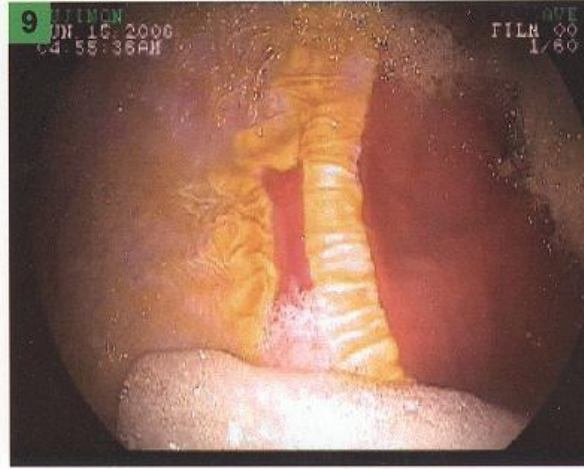
# Inciting causes of GI pain:

## GASTRIC ULCERS

- ▶ Often mild and intermittent
- ▶ ~50% riding horse population
- ▶ Associated with: Increased grain, decreased forage, increased time stalled, heavy exercise, NSAIDS (bute or banamine)
- ▶ Severity of ulcers and severity of signs not necessarily associated



# Gastroscopy...



# Gastric ulcers

## ▶ Management

- Alfalfa hay (higher protein/Calcium diets)
- Low starch/sugar diets
- Continuous high fiber food



## ▶ Treatment

- Omeprazole:Gastrogard (Empty :)
- Sucralfate
- Ranitidine
- Cimetidine



# Inciting causes of GI pain

## INFLAMMATION

Inflammation: Possible causes

- ▶ Bacterial overgrowth (Prebiotics Probiotics?)
  - ▶ infection (Salmonella ,Clostridium, Corona )
  - ▶ IBD (Inflammatory Bowell Disease)
  - ▶ Dietary intolerance?
  - ▶ Parasites– Tapeworms, encysted strongyles
  - ▶ Toxins/weeds
  - ▶ Neoplasia
- 
- ▶ Large Intestine–Colitis–Diarrhea
    - Clostridia
    - Salmonella
  - ▶ Small Intestine–enteritis
  - ▶ Peritonitis
  - ▶ Right Dorsal Colitis/ulceration of RDC from NSAID use?



# Other things to consider...

## Not GI

- ▶ Colic (abdominal pain isn't always GI)
- ▶ Inside the abdomen...but not the GI tract
  - Liver issues (biliary stones/gall stones)
  - Kidney stones/bladder infections
  - Peritonitis (infection in the abdomen around the intestine)
  - Masses/neoplasia

# Cody

- ▶ 12 year old Quarter horse mare
- ▶ Presenting complaints
  - Chronic mild colic (6weeks)
  - Weight loss (4 weeks)
  - Dermatitis (1 and 10 months prior to admission)
  - Laboratory abnormalities
    - Increased liver values (ALP, GGT)



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ATL

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LIVER

DUODENUM



RDC

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# Diagnostic explore

- ▶ Common bile duct obstruction?
  - Golf ball sized stone palpable in common bile duct
  - Easily broken up and milked into the duodenum



WILSON, CLASSY  
VERU/B

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C5-2 Abd/Gen  
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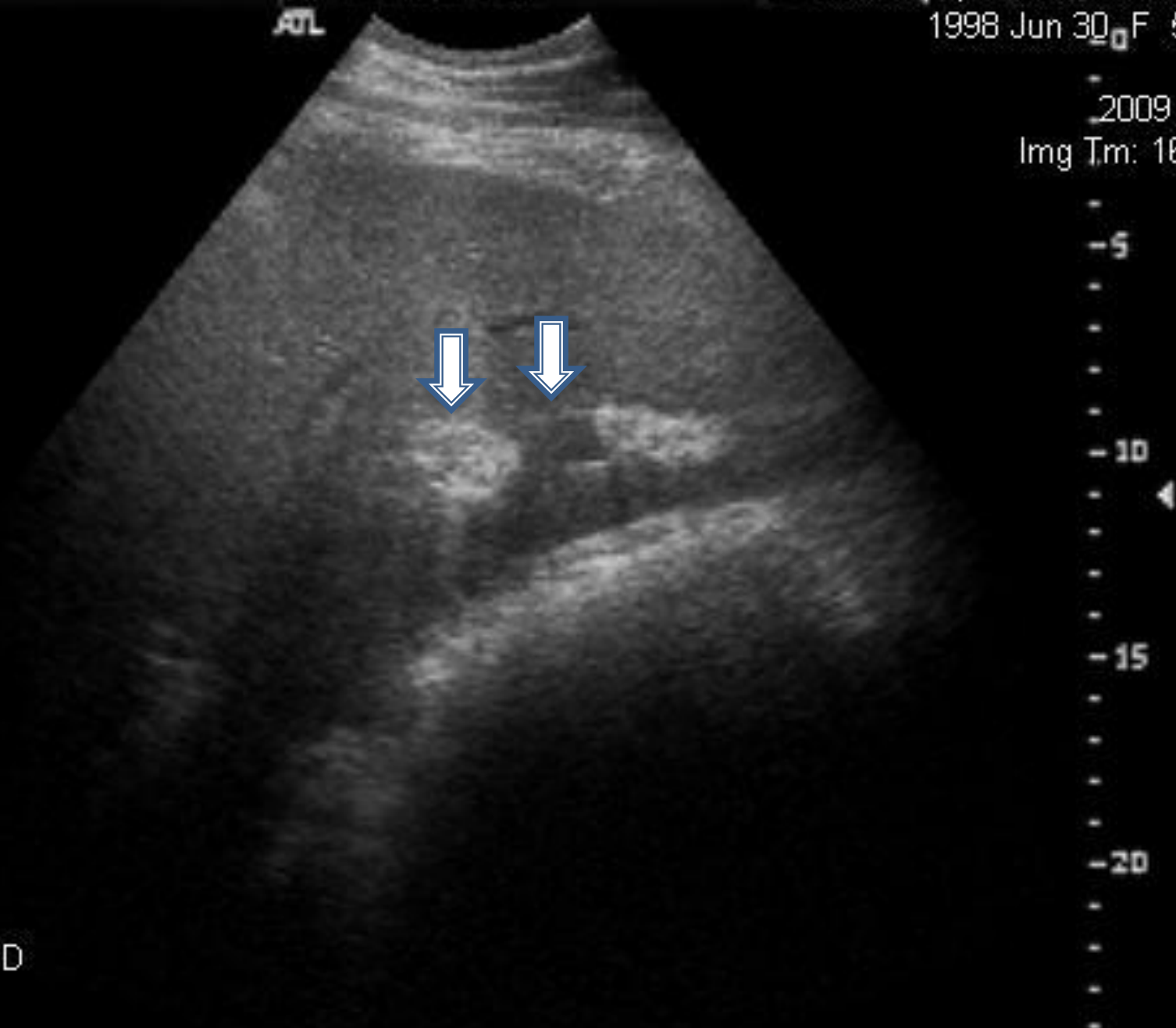
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# Other things to consider...

- ▶ It's not the abdomen...
  - Limb infections/lameness
  - Chest pain/heart disease
  - Pneumonia
  - Tetanus



# When colic happens In India...

- ▶ How Often does it occur in India?
- ▶ How serious usually?
- ▶ result in death common?
- ▶ How do you treat?



# Risk Factors in India...

- ▶ Lack of water
- ▶ Parasites
- ▶ Eating Poor quality forage/food
- ▶ Poor dental care
- ▶ Other
- ▶ You tell me



# Take Home Message

- ▶ Generally most horses recover without surgical intervention

Some need treatment; some spontaneously get better; some just need to be walked; some die

- ▶ Good management practices to minimize risk factors
  - Routine dental exam
  - Gradual feed changes (hay as well as grain)
  - Limited concentrates (within reason)
  - Higher fiber diets
  - Routine deworming based on fecal egg counts to control the parasite burden

# Colic...

- ▶ Abdominal pain
  - Mostly GI in origin
    - Impactions, mild inflammation, and spasmodic gas colics are generally responsive to medical management in the field
    - Surgical intervention/hospitalization even euthanasia may be required in severe cases where the intestine is displaced or twisted
  - Keep an open mind
    - Liver

