

Application of key anatomical concepts - GDV



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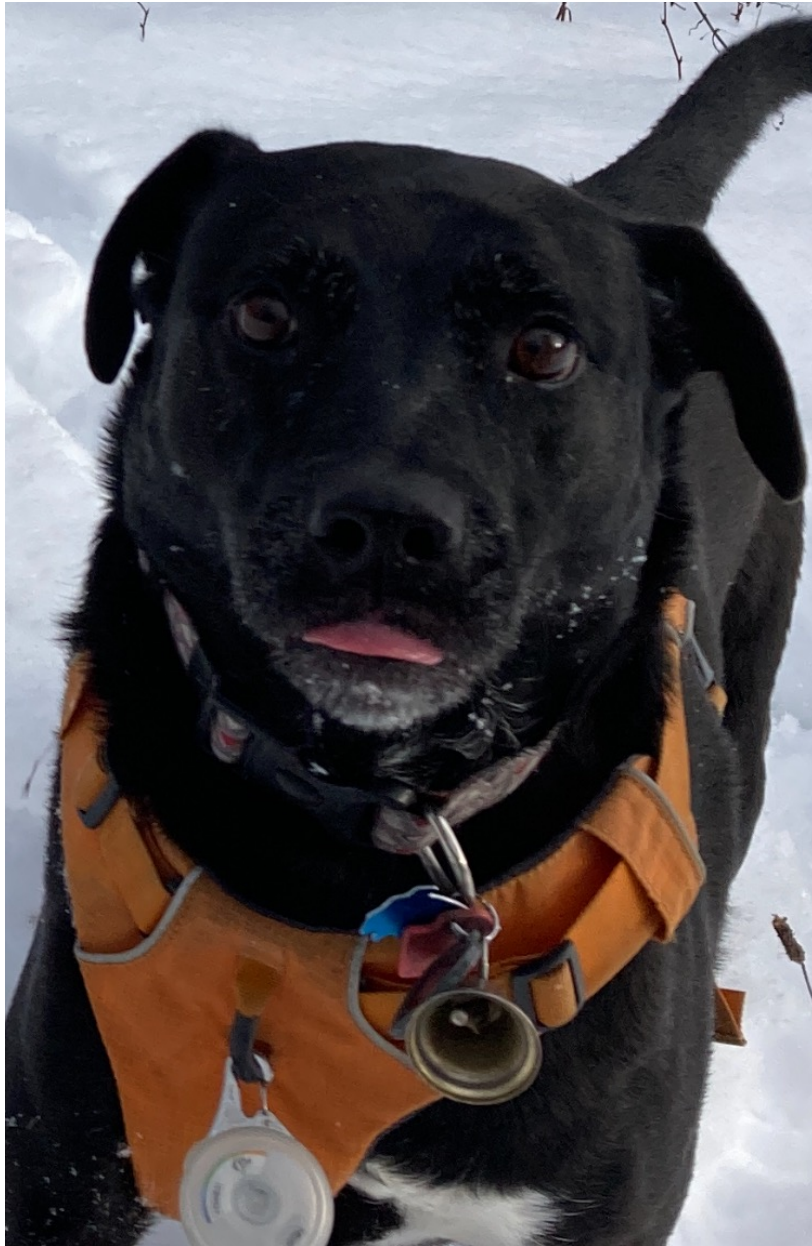
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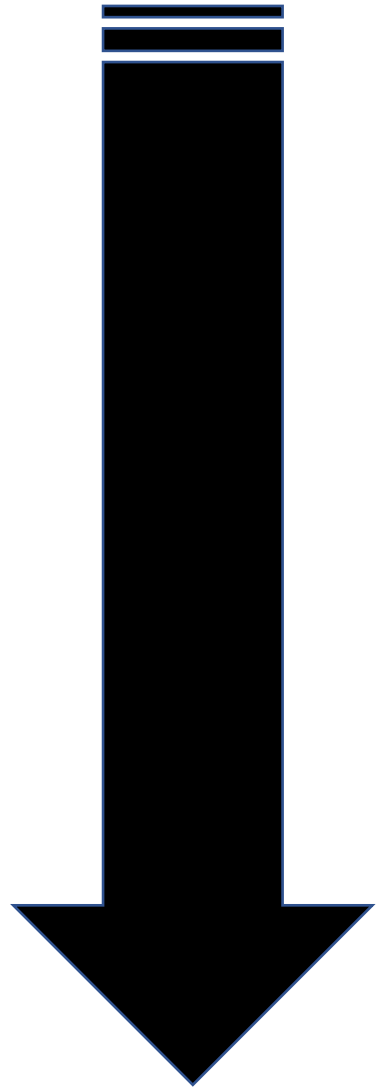
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Clinical Case Presentation

The Problem-Solving Process



Identify initial concerns/questions

Organize available information

State the problem(s)

Develop list of DDx

Rank DDx

Develop diagnostic plan

Re-rank DDx list

Consolidate knowledge & concepts

Rico presents on emergency

Repeatedly trying to
vomit



Questions for the owner?

Questions for the owner?

- How is his appetite? Any changes to how much he is eating/drinking?
- Any sneezing? Coughing? Vomiting? Diarrhea?
- How is his energy level?
- How long has he been retching/vomiting? Frequency? Amount of effort?
- What is the character of the vomit, if present?
- Any travel?
- Any activities that brings him into contact with other dogs (dog park, daycare, recent boarding, etc.)?
- Any concerns with your other animals?
- Any exposure to chemicals or potential toxins?
- Did he get into/eat anything he should not?

History

- Two days of anxious behavior, restlessness and abnormal posture following strenuous exercise
- Not eating or defecating; non-productive retching; hypersalivating
- Rico is highly distressed
- Diet is Purina Proplan Senior (beef & rice)
- No other major medical history
- Vaccinations & flea/tick/heartworm/GI parasiticides current
- Other dog in house is doing well, no travel or other dog exposure

Physical exam findings

- QAR
- Distended abdomen
- Abdominal pain
- Pale mucous membranes
- Prolonged CRT
- Weak pulses
- Tachycardia
- Tachypnea, dyspnea
- Cardiac arrhythmias



Presumptive diagnosis- Gastric dilatation & volvulus



Confirmed with RIGHT lateral radiograph revealing compartmentalization of stomach -- “Double Bubble”

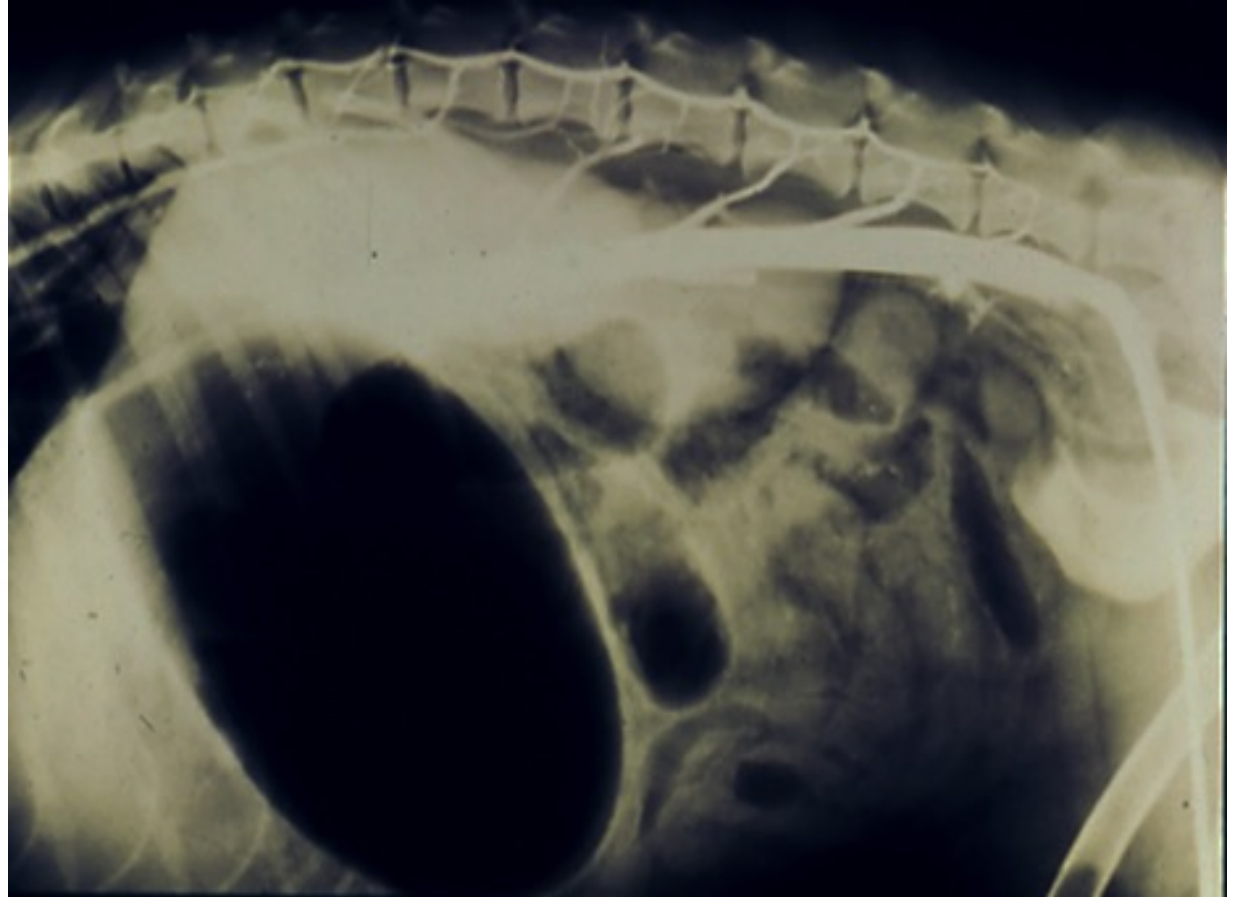
Definition

- Life-threatening emergency
- Dilation of stomach with gas, food and fluid
- Rotation on mesenteric axis
- Progressive gastric distention
- Risk of gastric necrosis
- Obstructive shock
- Collapse



Initial steps / treatment

1. Place left and right IV catheters – correct fluid/electrolyte imbalances; treat shock
2. Base-line bloodwork (CBC, chem, electrolytes, etc.)
3. Hook up monitoring equipment (blood pressure, oxygen saturation, pulse, ECG, etc.)



Next steps / treatment

Decompress stomach – Pass tube orally or IV catheter percutaneously on right side



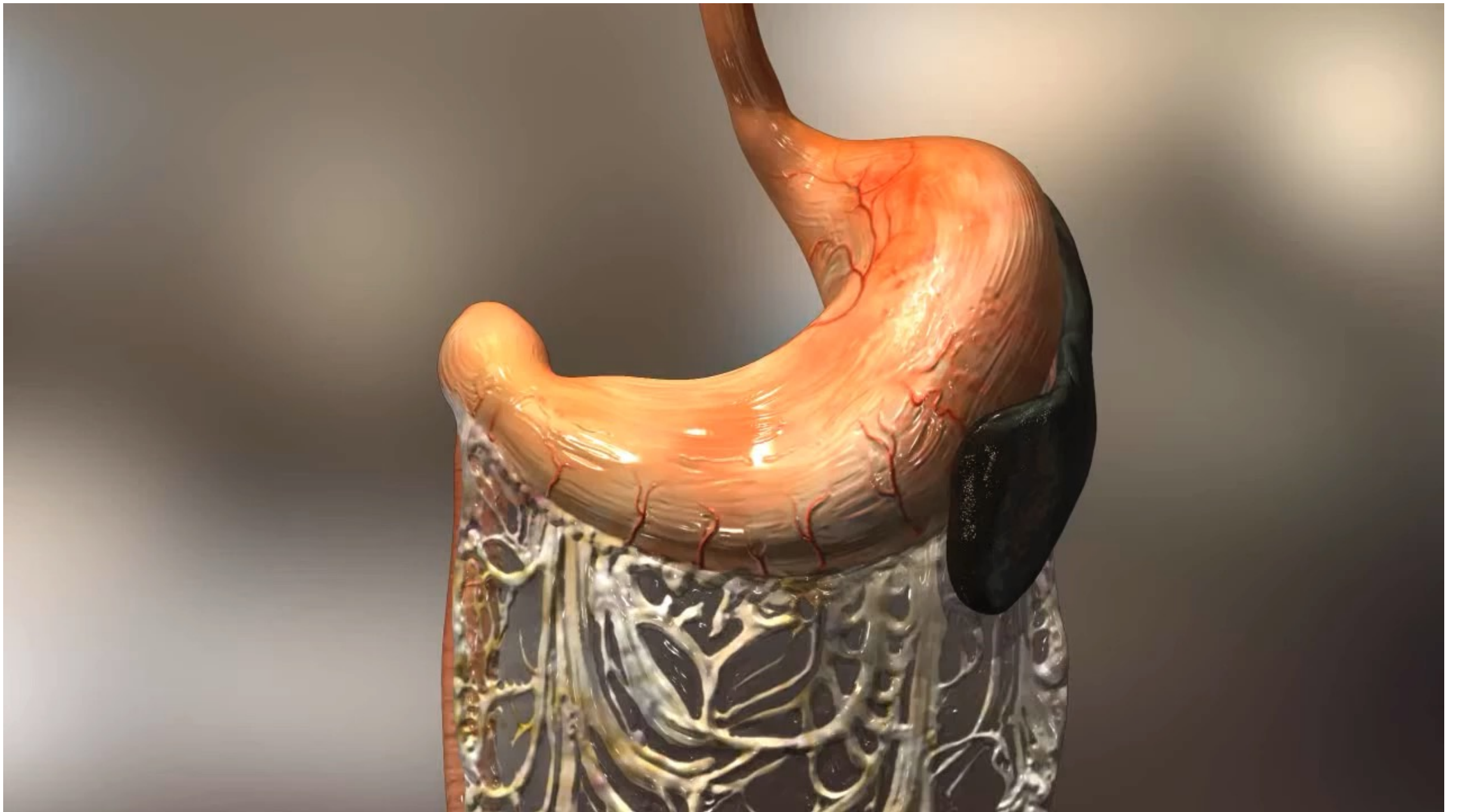
S u r g e r y - V i d e o

Surgeon in the video

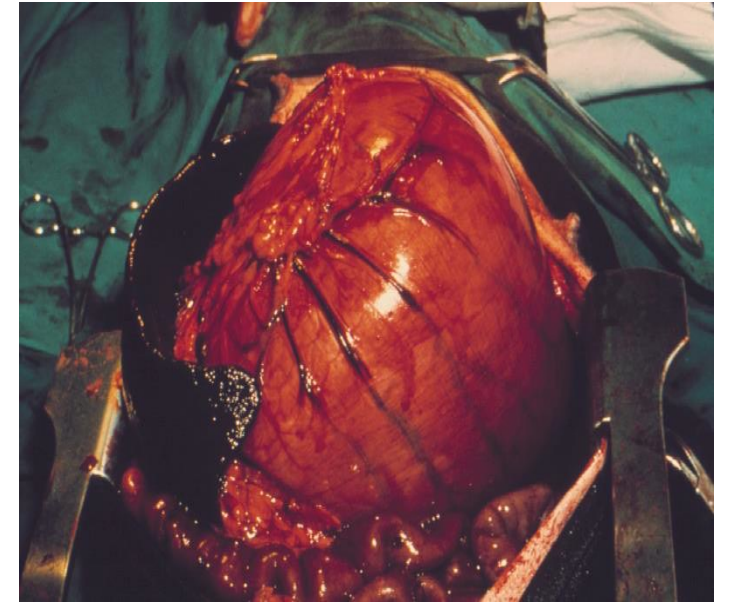
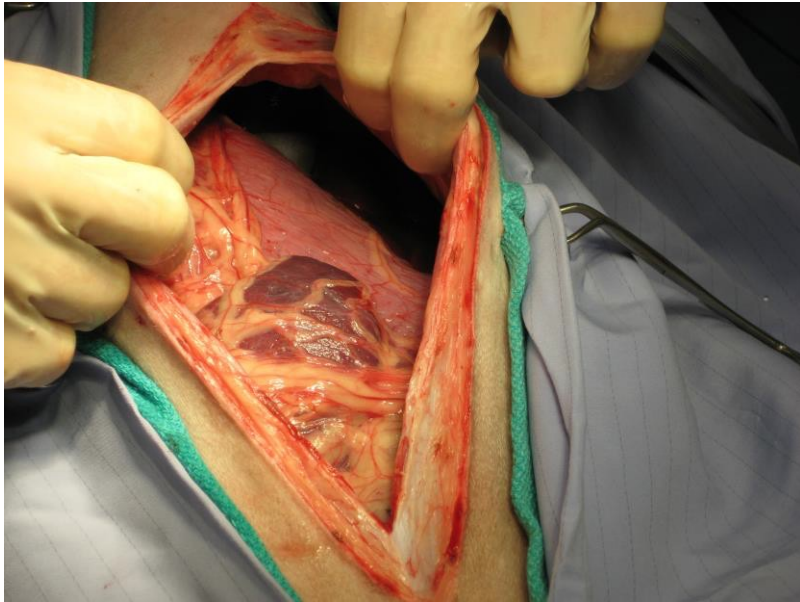
- John Berg DVM, MS, DACVS Tufts University
- Cummings School of Veterinary Medicine

Expert commentary from SVM community

- Dr. Susannah Sample DVM, MS, PhD, DACVS
- UW Madison SVM

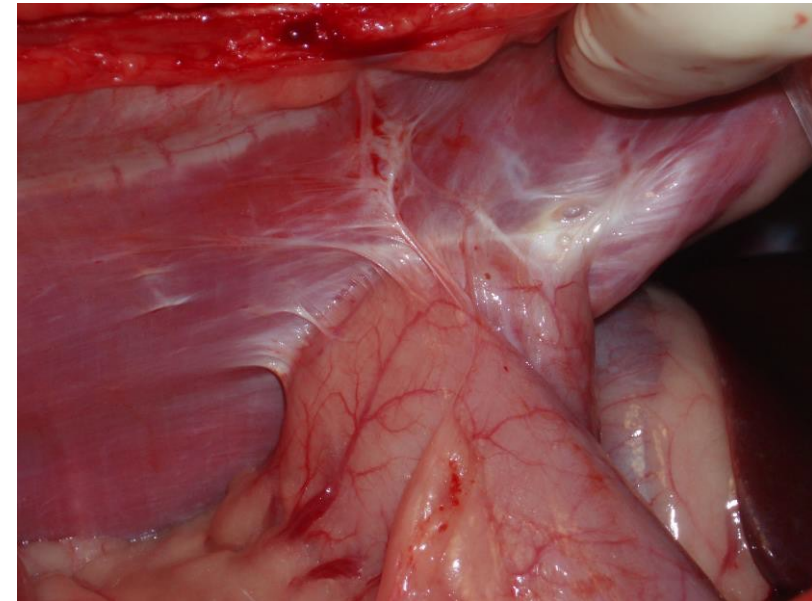
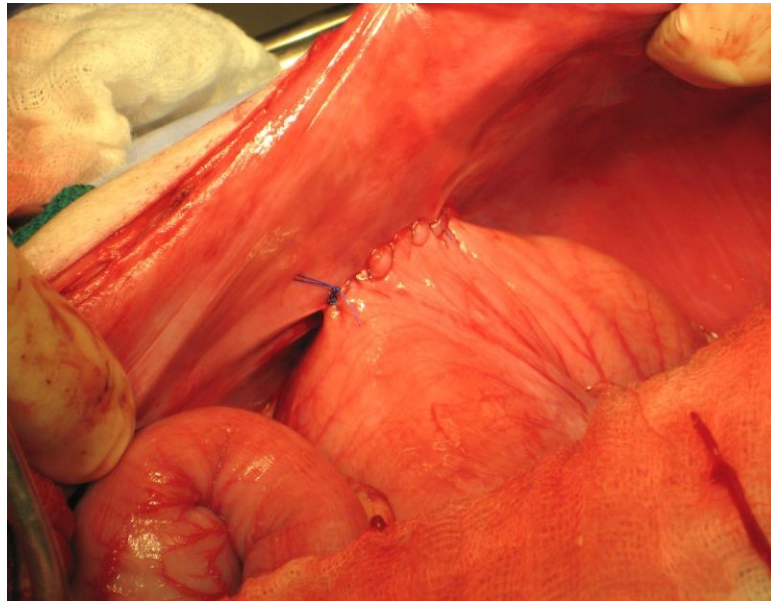
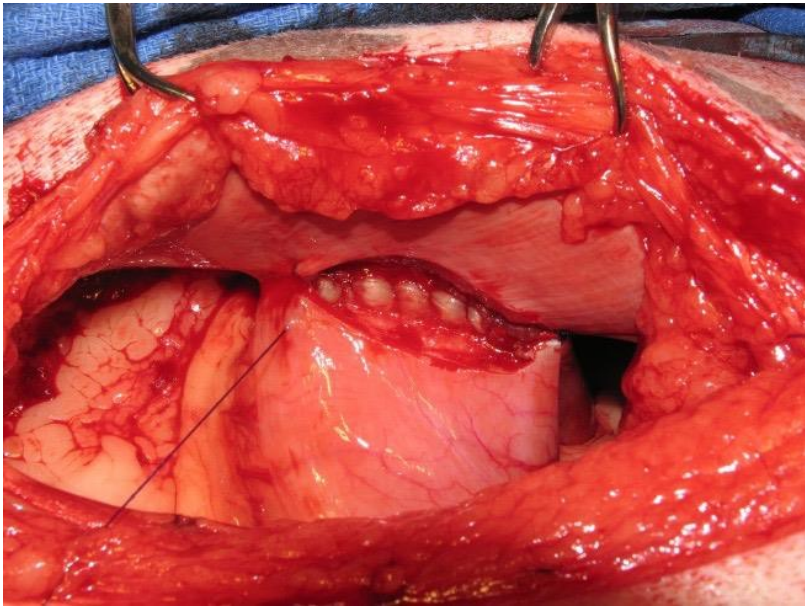


Surgical management



Derotate stomach, decompress, assess for devascularization/necrosis

Surgical management



Right-sided gastropexy - incisional



If caught early most
dogs recover!

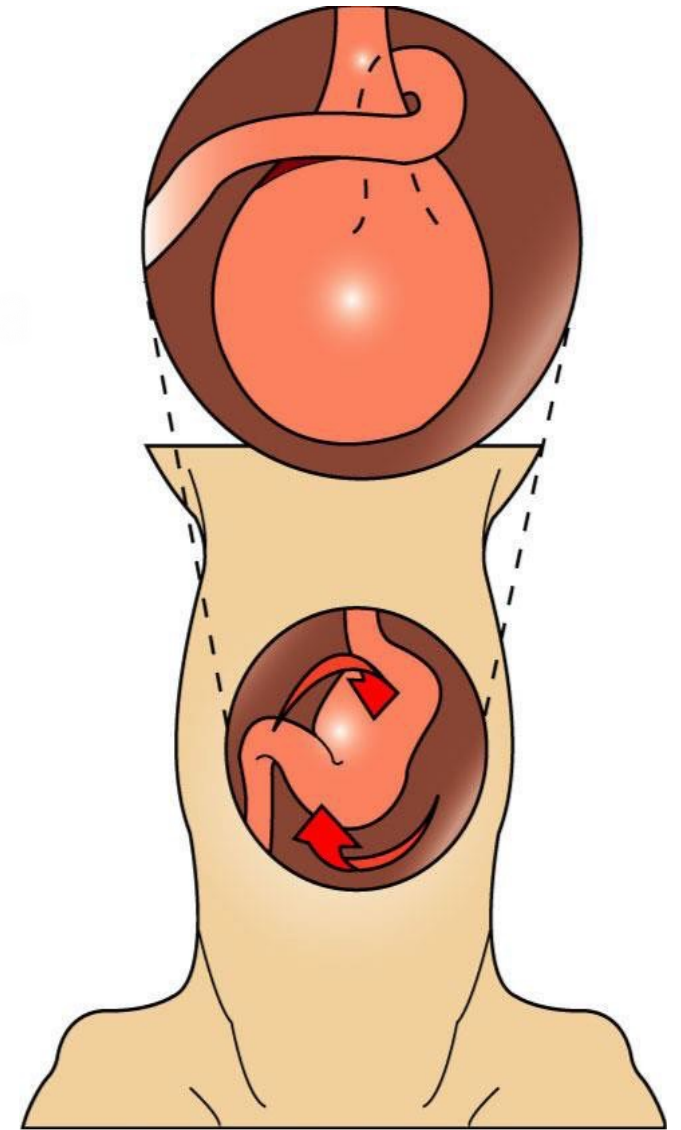
ETIOLOGY-UNKNOWN

- GENETICS!!!!
- Rigorous exercise after eating
- Over-eating and aerophagia
- Anatomic predisposition, TD:TW
- Delayed gastric emptying
- Gastroesophageal sphincter dysfunction
- Change of environment
- Stress



Pathophysiology

- Gastric dilation precedes volvulus
- Clock-wise rotation 90-360 degrees
- Pylorus moves ventrally and to left near cardia
- Splenic enlargement or torsion
- Compression of caudal vena cava
- Obstructive shock
- Risk of gastric necrosis
- Metabolic derangements
- Cardiac arrhythmias



(From Fossum TW: *Small animal surgery*, ed 2, St Louis, 2002, Mosby.)

Take home messages

- Right lateral radiograph most useful for diagnosis
- Rapid decompression and IV fluid resuscitation important in ER setting
- Stomach rotates in clockwise direction
- Right-sided gastropexy is essential part of surgical treatment
- Overall prognosis is fair to good if detected early and treated rapidly
- Preventative (prophylactic) gastropexy



Questions?

GI topographic model usage & Canvas practice questions

