

Radiology Extra Credit

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Signalment: 3 month old, female intact, German shepherd

Presenting complaint/history: Patient presented to the VHC on 5/11 with a three day history of diarrhea, inappetance, lethargy, and one instance of vomiting. Patient is normally very active and vocal, but simply has not been herself for the past few days.

Physical exam: Patient is extremely painful upon abdominal palpation. All other parameters within normal limits.

Blood work abnormalities:

Anemia, nonregenerative- many potential causes. Could just be early acquired anemia, could be due to inflammation, or a marrow disorder.

Hyperglycemia- likely due to stress.

Decreased creatinine- likely due to muscle damage.

Hypoproteinemia (both albumin and globulin decreased)- likely due to inflammation, malabsorption, or maldigestion.

Hyperphosphatemia- likely due to the diarrhea

Slight hyponatremia – likely due to the diarrhea

Increased CK- likely due to muscle damage, could be either skeletal or smooth.

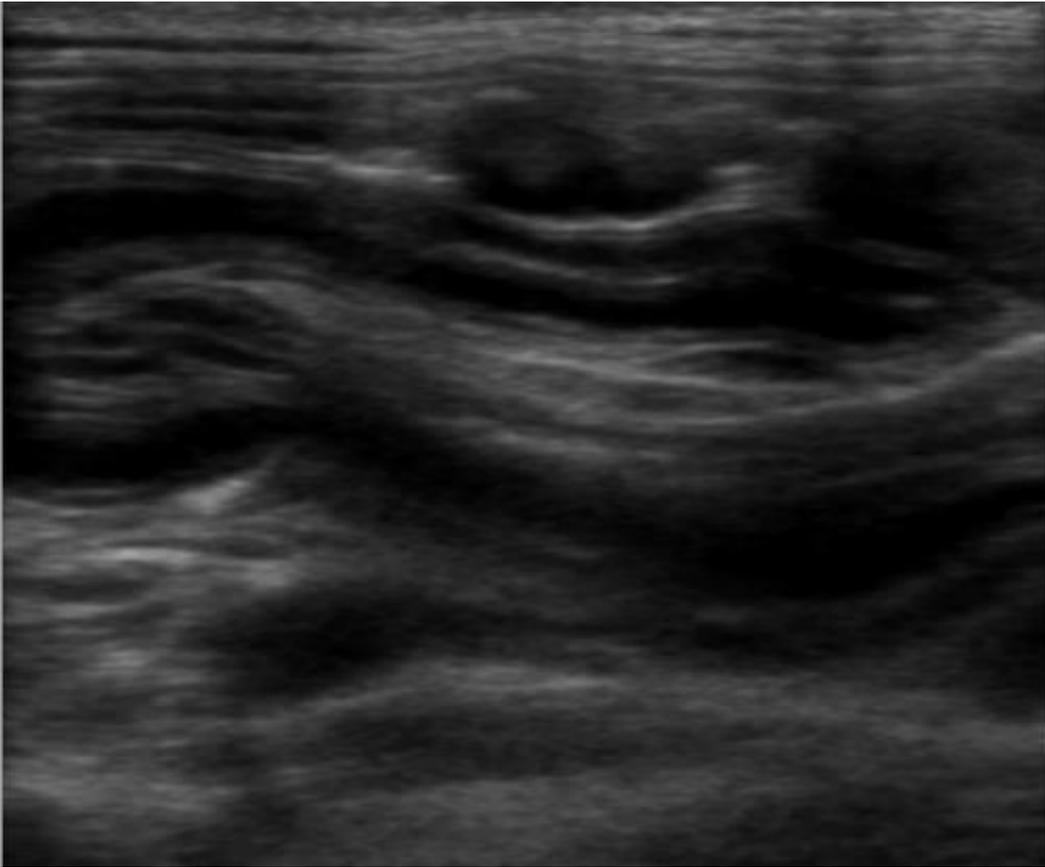
Radiographs:

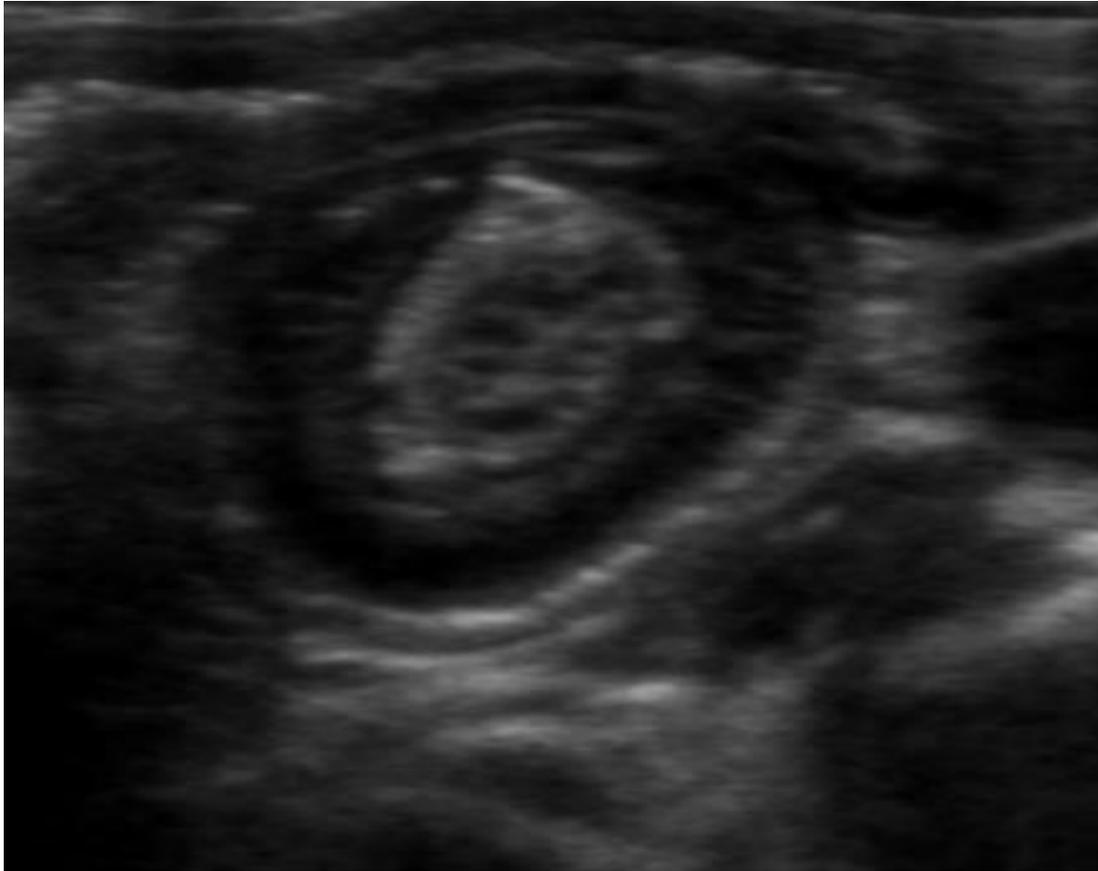




Radiographic interpretation: The abdominal contour is normal with reduced serosal detail, likely due to the patient's young age. There are two distinct populations of bowel, one gas and fluid distended greater than 1.5 times the height of L2 and one with appropriate sized loops with minimal content. There is a small focal metal opacity superimposed over the right cranial abdomen. There is a mass effect in the right ventral abdomen resulting in a ventral and caudal displacement of small intestine. Mechanical obstruction is present throughout.

Ultrasound images:





Ultrasound interpretation: Liver, spleen, kidneys, adrenal glands, and bladder all unremarkable. Small volume of hypoechoic fluid found in the peritoneal space. Gallbladder moderately enlarged. A focal segment of small intestine was found to be distended, with a thickened wall and echogenic layer of mucosa. A second intestinal segment was found within the lumen of the first segment, measuring greater than 5 cm in length. Multiple mesenteric lymph nodes surrounding the intussusception were enlarged, measuring up to 1.9 cm in thickness.

Conclusion: The patient was found to have an ileocolic intussusception.

Mechanical obstructions are serious medical problems that require timely surgical intervention to correct. They present radiographically as either a focal or segmental non-uniform dilation of the intestine with moderate to severe bowel distension. The bowel is no longer fully functional and rapid surgical intervention is crucial for a positive prognosis. This contrasts with functional ileus, which presents diffusely with mild to moderate bowel distension, which can sometimes be managed medically. Ultrasound of intussusceptions is even more distinctive, as the telescoping of one intestinal segment into the other appears similar to a cross sectional view of an onion.

Initial outcome: Patient underwent surgery to reduce and correct the ileocolic intussusception. Due to a section of devitalized small intestine, resection and anastomosis were required. Patient was dewormed with fenbendazole (5/12/15) and ponazuril (5/14/15), as the fecal came back positive for cystoisospora. Patient recovered in hospital over the next three days and was sent home.