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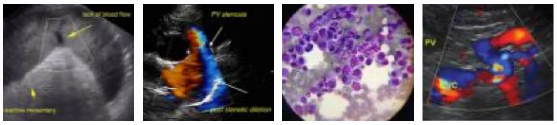


ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Zoey Galloway

SPECIES

Canine

BREED

Shih Tzu

SEX

Female Spayed

AGE

15 years

WEIGHT

7.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

The Vet Hospital

REFERRING VET

Dr Berman

INVOICE

13563

DATE

7.5.23

PRESENTING CLINICAL SIGNS

History: Severe lethargy, inappetence, black tarry stool Anorexia since Sunday Radiographic Findings Dilated small intestines Loss of serosal detail in cranial abdomen Otherwise no apparent abnormalities Primary Question/Differential to Be Answered in This Exam Neoplasia, obstruction, ileus, etc

Abnormal PE/Chem/CBC/UA Results: LIP > 1000 HCT 26.4% (was 31.7% at ER a few days ago) ALKP (237) and BUN (50.7) moderately elevated AST/ALT wnl Mild hypokalemia (3.7) hypocalcemia (8) and mild hyperphosphatemia (5.8) TP (4.6) and ALB (1.8) low

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal in size (3.46 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Punctate nonobstructive nephroliths are visualized bilaterally. There is no evidence of pyelectasia, or infarcts observed.

Right kidney is normal in size (3.62 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Punctate nonobstructive nephroliths are visualized bilaterally. There is no evidence of pyelectasia, or infarcts observed.

Adrenal Glands

Adrenal glands are plump/swollen in size (left cranial pole: 0.49 cm / caudal pole: 0.97 cm) (right: 1.02 cranial pole / caudal pole: 0.65 cm). Normal shape and contour are maintained without evidence of capsular invasion. Some parenchymal heterogenicity is present without concerning capsular distortion. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

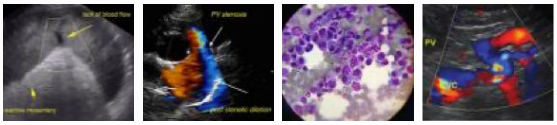
Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

Mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted, most appreciated near the pylorus. There is no loss of mural detail. Layering is normal. There is moderate-to-marked luminal fluid accumulation. No evidence of masses/nodules or foreign material present.



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The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Enhanced hyperechoic ill-defined surrounding fat is noted.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

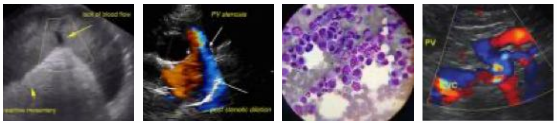
- Acute pancreatis is suspected but appears mild compared to the reported clinical signs. A more aggressive pancreatitis could be emerging, or concurrent gastrointestinal disease, microulceration, etc. could be present as well, given the concurrent gastritis - consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.
- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Mild gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

Secondary Findings

- Punctate nonobstructive nephroliths bilaterally

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. In the meantime, supportive/symptomatic medical management of acute gastroenteritis, +/- microulceration, and potentially mild or emerging acute pancreatitis is recommended in the



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form of fluid therapy, antiemetics, gastric protectants (including sucralfate), a probiotic (such Visbiome or Proviable) and empirical deworming with a 5-day course of Panacur. Close monitoring of the reportedly dropping hematocrit is recommended, given the reported GI bleed, as ultimately, transfusion could become necessary. If gastrointestinal signs persist, and a diagnosis is not obtained, further evaluation the stomach and proximal bowel (via upper GI gastroscopy/endoscopy) for further visualization and biopsies could be considered.

- The described adrenal gland, liver and gallbladder changes can all be seen with hyperadrenocorticism. However, hyperadrenocorticism does not result in the reported clinical signs and should not be further pursued while patient is concurrently ill, due to the risks of false positives.

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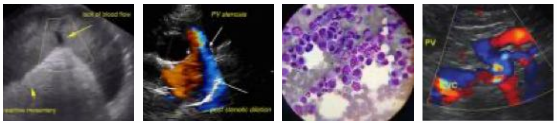

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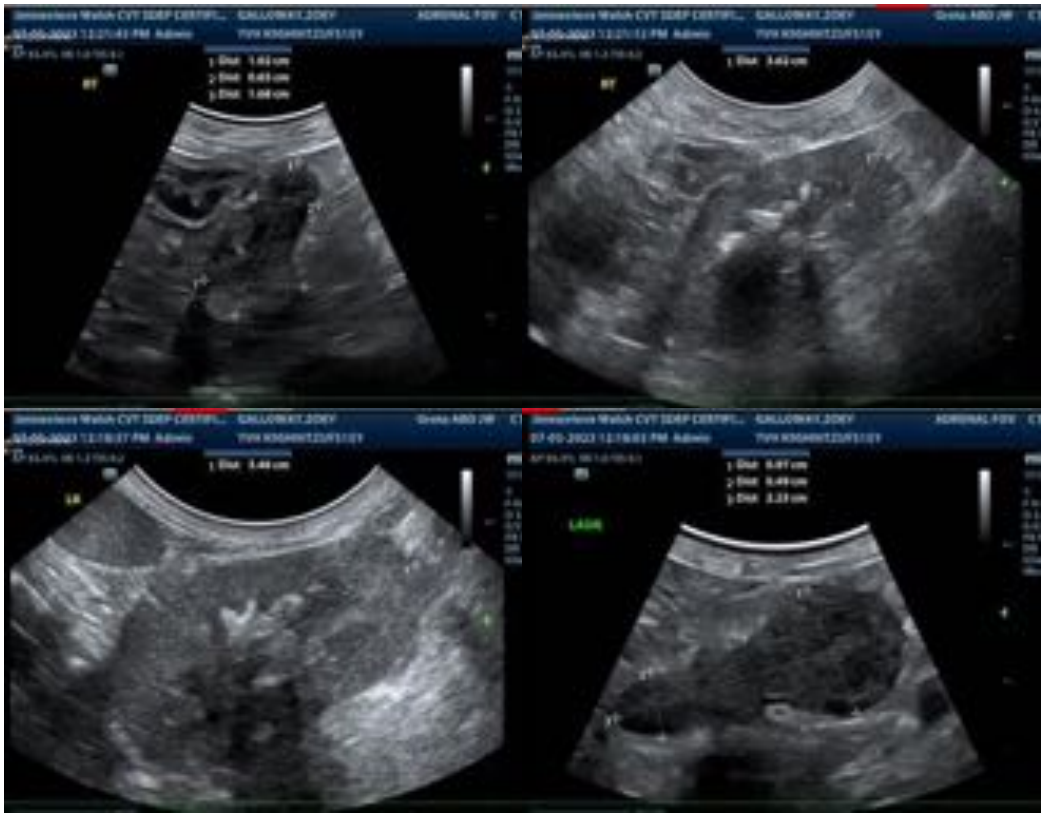

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Beth Johnson, DVM DACVIM
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