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Clinical Sonography & Telecytology
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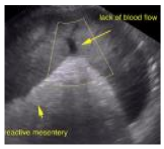
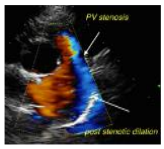
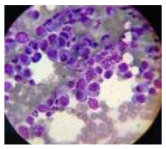
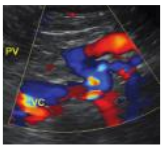





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Rosario Calvo

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

12 Years

WEIGHT

17.2 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Ferrer, DVM

HOSPITAL NAME

Paseos VC

REFERRING VET

Dra. Davila

INVOICE

23736

DATE

7/31/23

PRESENTING CLINICAL SIGNS

The patient presented as a referral due to a history of vomiting on July 21, 2023. Pt ate Salmon with onions. Hospitalization was performed to stabilize. Relapsed on July,28 with anorexia, been hospitalized since. DX: Liver Failure and Intoxication.

Abnormal PE/Chem/CBC/UA Results: PE: Icterus CBC Hematocrit: 35.8 (37.3 - 61.7 %) Hemoglobin: 12.3 (13.1 - 20.5 g/dL) MCV: 60.9 (61.6 - 73.5 fL) MCH: 20.9 (21.2 - 25.9 pg) Neutrophils: 12.41 (2.95 - 11.64 K/µL) CHEM Total Protein: 9.7 (5.2 - 8.2 g/dL) Globulin: 6.2 (2.5 - 4.5 g/dL) GGT: 53 (0 - 11 U/L) Bilirubin - Total: 10.6 (0.0 - 0.9 mg/dL) Cholesterol: >520 (110 - 320 mg/dL)

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 (4.69 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Trace pyelectasia is noted in the left kidney.

Right kidney is normal in size (4.55 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Trace pyelectasia is noted in the right kidney.

Adrenal Glands

Left adrenal gland is normal in size (0.76 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. The cranial pole is difficult to fully visualize in these images.

Right adrenal gland is normal in size (0.41 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. The cranial pole is difficult to fully visualize in these images.

Spleen

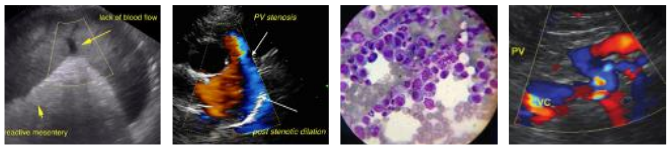
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). A 1.0 cm x 1.3 cm hypo to anechoic non-capsule-disrupting nodule was noted near the head of the spleen. 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



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The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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

- Acute pancreatitis is suspected, as at least a partial, if not total, contributing factor to this patients cholestasis.
- 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. Some concurrent intrahepatic cholestasis cannot be definitively ruled out.
- 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.
- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not recently evaluated, a quantitative PLI is recommended.

In the meantime, medical management of pancreatitis with anti-emetics, gastroprotectants, appetite stimulants or nutritional support as needed, pain management, broad spectrum antibiotics, and fluid therapy is recommended. If possible, a fresh frozen plasma transfusion and hyperbaric oxygen therapy (HBOT) could be beneficial. Monitoring of the pancreas with power doppler is recommended to identify possible necrosis as well as other potential sequelae such as abscesses, etc.

Pending patient response, laboratory changes, etc., especially if the globulin count remains increased, additionally, a fine needle aspirate of the liver could be considered if patients coagulation status is appropriate, as could testing for Leptospirosis.

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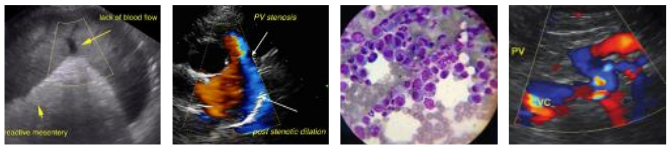

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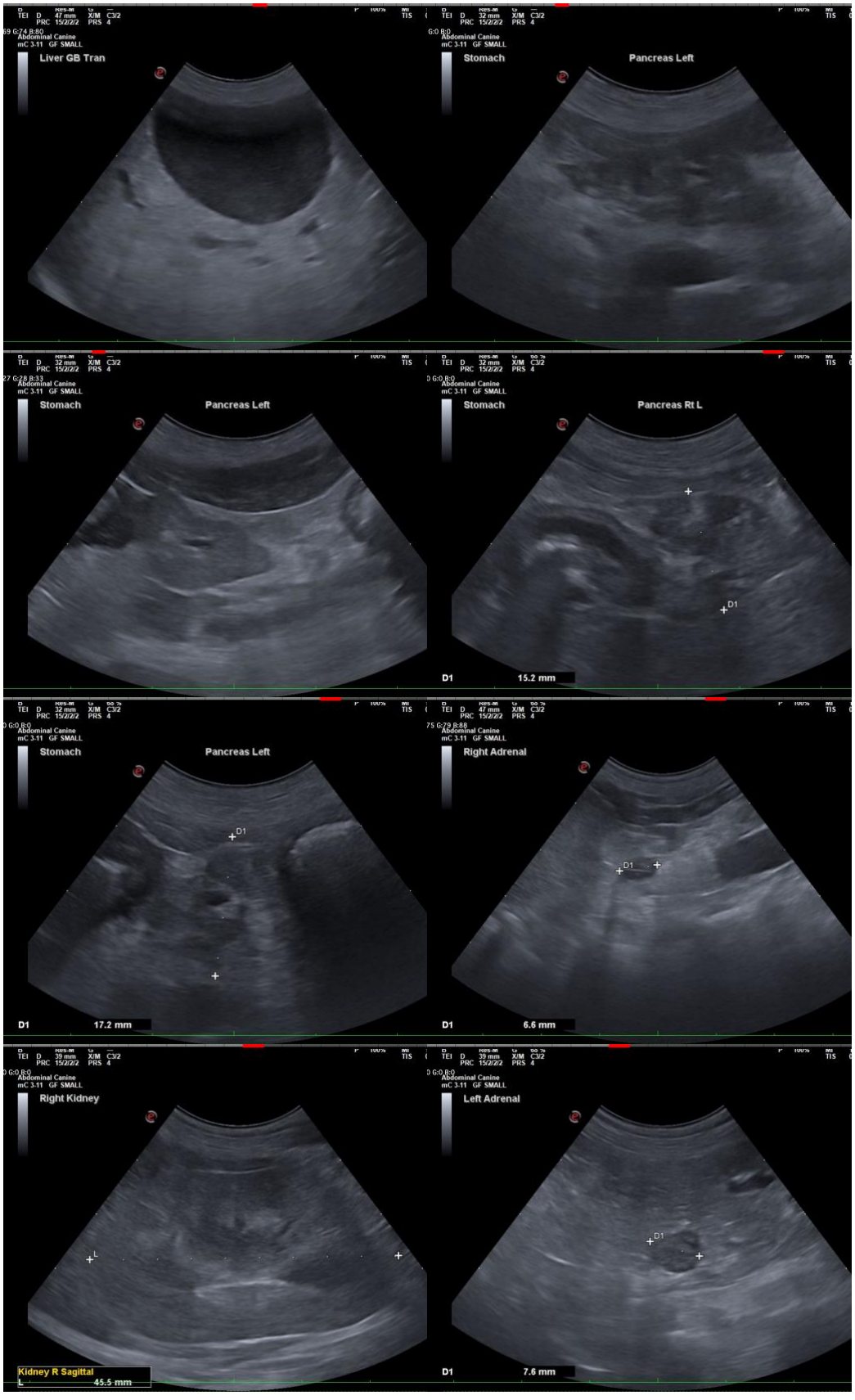

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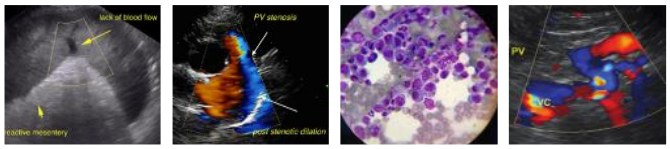

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

info@sonopath.com