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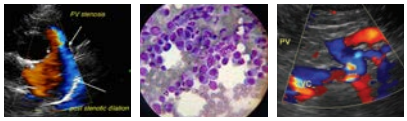

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

7/11/22

PATIENT

Stoli Affeld

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

4/27/08

WEIGHT

23 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Care Center

REFERRING VET

Dr. Muedeking

INVOICE

39380

PRESENTING CLINICAL SIGNS

Episodes of fainting- has happened 4x since Thursday.

Current Medications: None.
Labs: Pending.
Radiographs: Abdominal mass associated with spleen.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Stat requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately 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.

The right kidney is normal in size (3.81 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted, primarily in the diverticular of the kidney. A cortical cyst was noted in the right kidney.

The left kidney is normal in size (4.4 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted, primarily in the diverticular of the kidney.

Adrenal Glands

The adrenal glands are bilaterally plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. However, both adrenal glands have a mildly heterogeneous parenchyma. A hyperechoic adrenal nodule is present in the cranial pole of the right adrenal gland. The right adrenal gland measures 1.95 cm long x 0.80 cm at the cranial pole and 0.67 cm at the caudal pole. The left phrenicoabdominal vein appears invaded by echogenic tissue with reduced blood flow, suggestive of potential vascular invasion or thrombus. The left adrenal gland measures 2.0 cm long x 0.70 cm at the cranial pole and 0.62 cm at the caudal pole.

Spleen

The spleen is subjectively normal in size. Parenchyma is appropriately finely textured and homogeneous with normal echogenicity, except for three focal nodules, two of which result in capsular expansion. Near the head of the spleen is a 0.80 cm round, hypoechoic nodule resulting in capsule expansion. In the mid body there is a 1.0 cm round, hypoechoic nodule resulting in capsular expansion. Near the tail of the spleen, there is a smaller hypo- to anechoic nodule that does not result in capsular expansion.

Liver

The 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.

The 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

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas . There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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 (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images. No pericardial effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- Bilateral adrenomegaly with a hyperechoic adrenal nodule in the cranial pole of the right adrenal gland and suspect phrenicoabdominal invasion of the left adrenal gland – differentials include adrenal hyperplasia with concern for a possible emerging pheochromocytoma of the left adrenal gland.

- Multifocal hypo- to anechoic splenic nodules – can represent benign lesions such as cysts, hematomas, nodular hyperplasia, extramedullary hematopoiesis, etc. However, given the capsule expansion, infiltrative neoplasia, which can mimic benign lesions, cannot be ruled out.

- 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.

- 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

- Age related kidney change – This finding is expected/consistent with age-related mild degenerative disease and should be interpreted clinically in combination with laboratory changes.

- Bilateral non-obstructive nephrolithiasis.

INTERPRETATION & FURTHER RECOMMENDATIONS

This patient's reported collapse/fainting episodes could certainly be related to hemorrhage from the splenic nodules. However, there is no evidence of free fluid to support this. Given the concurrent changes, consideration has to be given to a possible vascular event secondary to adrenal disease. Therefore, recommendations include:

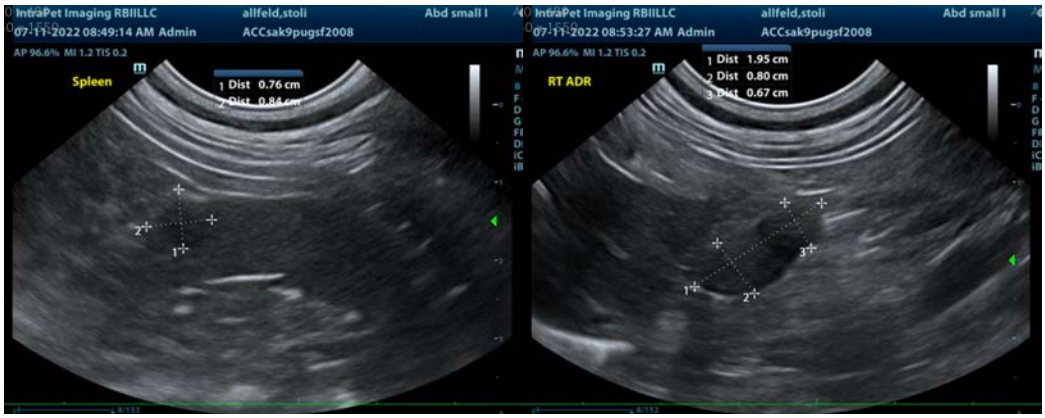
- Blood pressure if not recently evaluated.

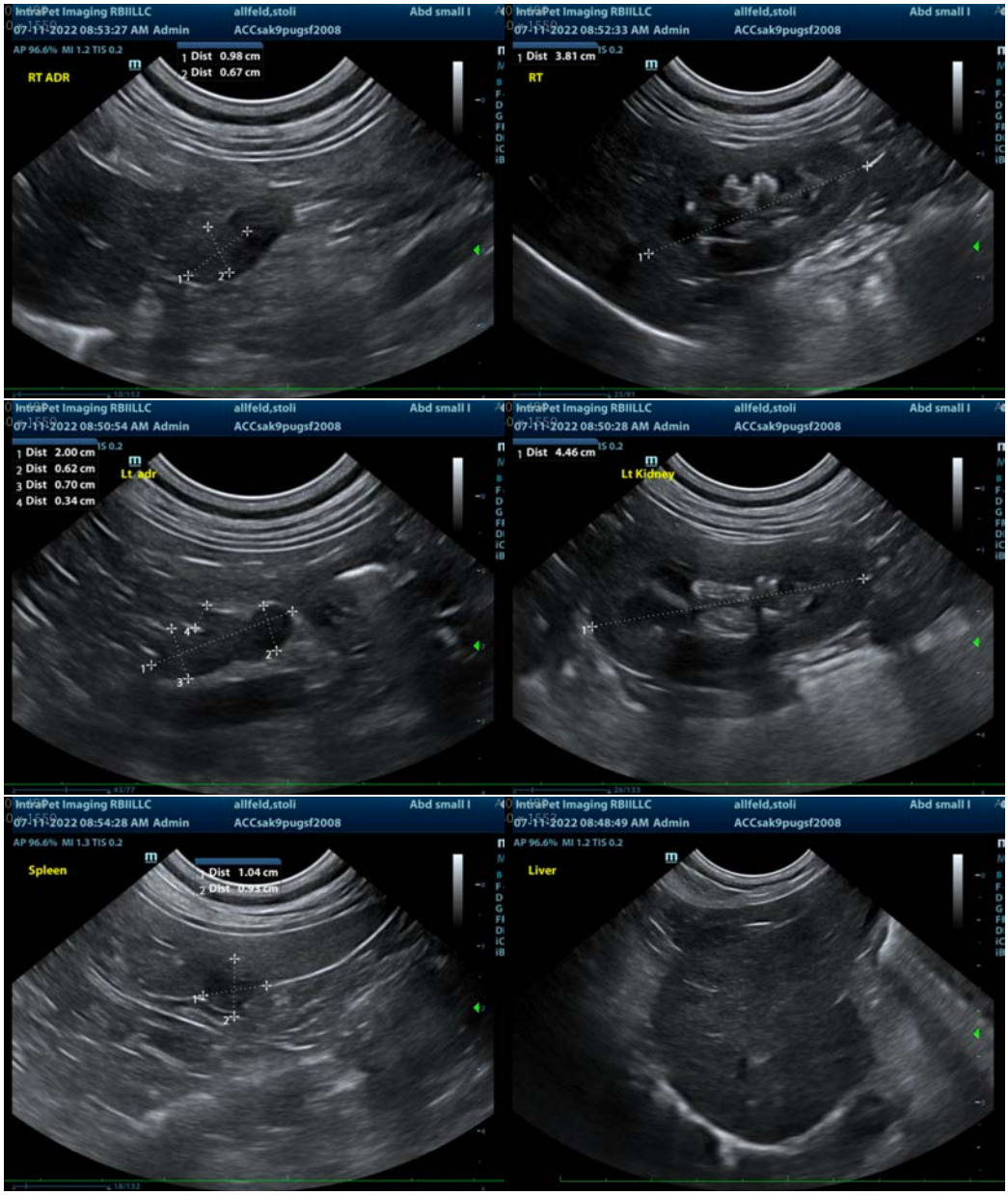
- Urinalysis. If protein is present in an otherwise quiet sediment, a urine protein to creatinine ratio followed by adrenal testing would be recommended to rule out both hyperadrenocorticism as well as potential pheochromocytoma.

- Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

- Echocardiogram is also recommended.

Ultimately, pending results, a splenectomy may be warranted, at which time a left adrenalectomy could be considered as well with a pre-surgical planning abdominal CT scan.

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Abd small I
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2 Dist 0.67 cm
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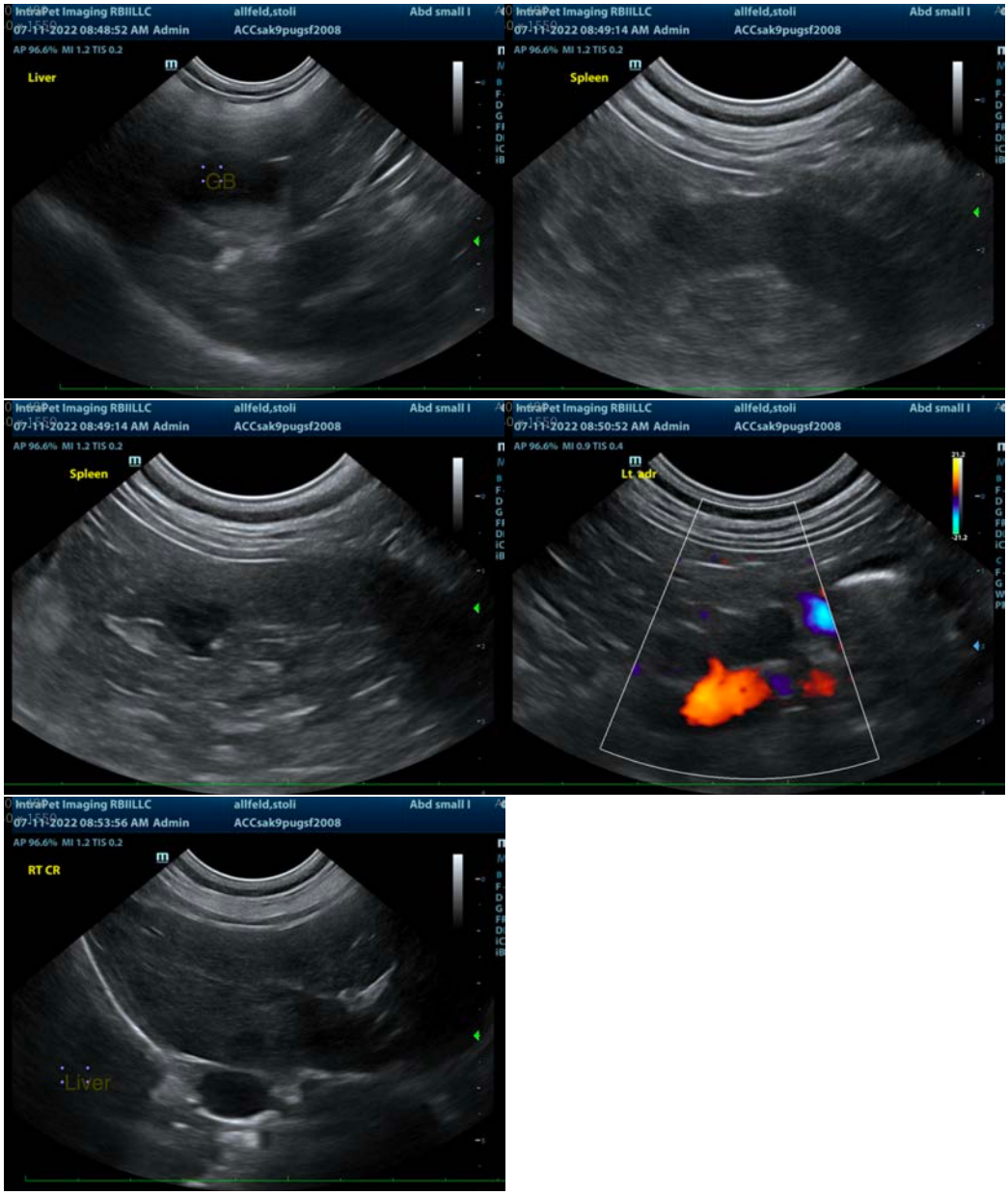
Liver



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. 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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