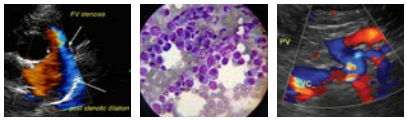
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE

1/6/23

PATIENT

Maggie Hammond

SPECIES

Canine

BREED

Terrier X

SEX

Spayed Female

AGE

10/5/09

WEIGHT

33.2 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Animal Care Center

REFERRING VET

Dr. Beavers

INVOICE

43982

PRESENTING CLINICAL SIGNS

Cushing's; was at AEH on 1/3-- breathing heavy, tremors/shaking.

Current Medications: Vetoryl 30mg 1 BID, was getting previcox 57mg, gabapentin 100mg 1 to 2 q8-12 hours.
Lab Results: from ER-- BUN elevated, ALT and ALKP elevated.
Radiographs: from ER noted chest wnl, mass effect in the cranial abdomen, hepatomegaly.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: DVM requested.
Imaging Performed By: Andi Parkinson, BS, RDMS.

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.

Kidneys are bilaterally irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is no pyelectasia noted and no mineral is observed. The right kidney is small and measures 3.75 cm. The left kidney is large (compensatory) and measures 6.23 cm. Cortical cysts noted bilaterally.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left measures 2.82 cm long x 1.03 cm at the cranial pole and 1.39 cm at the caudal pole. The right adrenal measures 2.8 cm long x 1.98 cm at the caudal pole.

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. A vague, homogeneous, isoechoic mass of about 4.0 cm in diameter is noted in the deep right liver. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild 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 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 (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.

There is no apparent lymphadenopathy noted in these images.

On the right side, within the CVC lumen, there is a 0.40-0.50 cm in diameter echogenic density, consistent with a clot/thrombus.

PRIMARY FINDINGS

- **Hyperechoic hepatomegaly -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

- **Homogeneous, isoechoic liver mass –** This could represent a benign lesion such as marked nodular hyperplasia, or hepatoma/adenoma. However, infiltrative neoplasia such as well differentiated hepatocellular carcinoma versus round cell neoplasia versus other cannot be definitively ruled out without tissue sampling.

- **Bilateral Adrenomegaly –** consistent with the reported previous diagnosis of hyperadrenocorticism and current Trilostane therapy.

- **Round, echogenic density within the CVC on the right side** – Concerning for a thrombus/clot. Adrenal gland invasion can't be ruled out but is considered less likely.

- **Chronic Kidney Disease with bilateral cortical cysts –** This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.

SECONDARY FINDINGS

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

- **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.

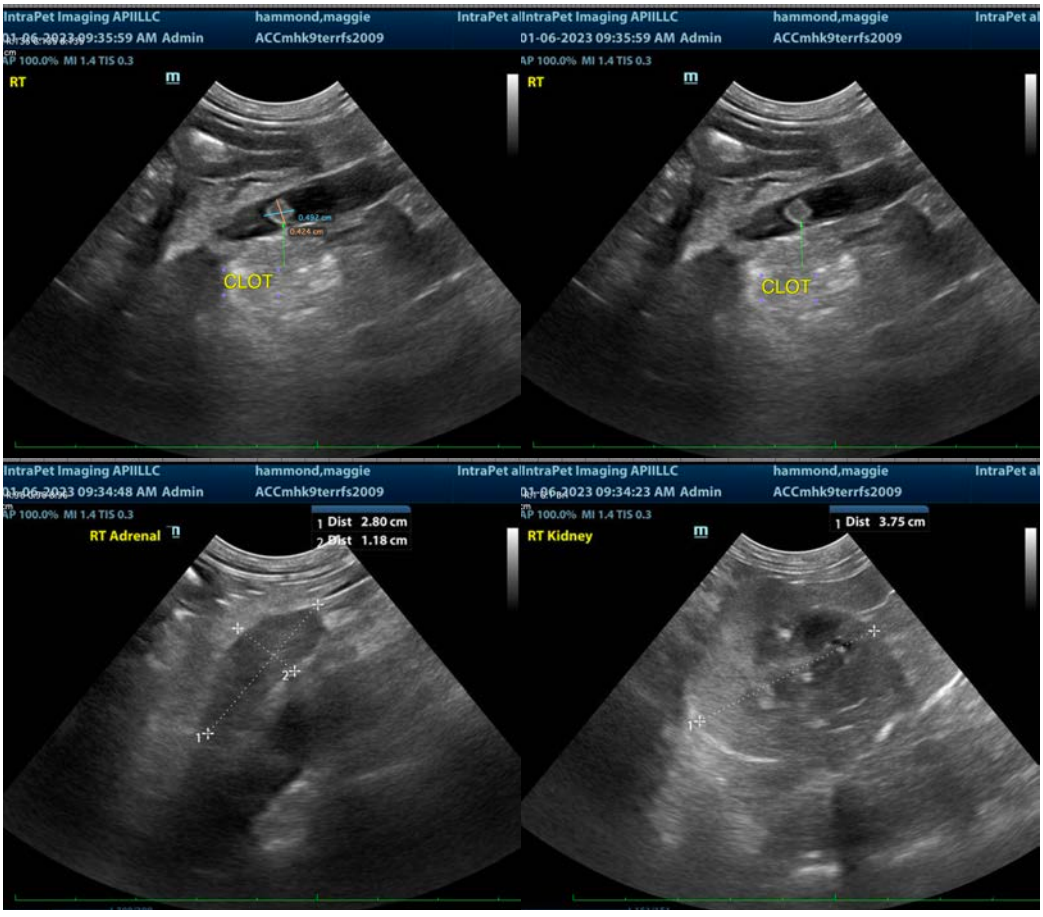
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

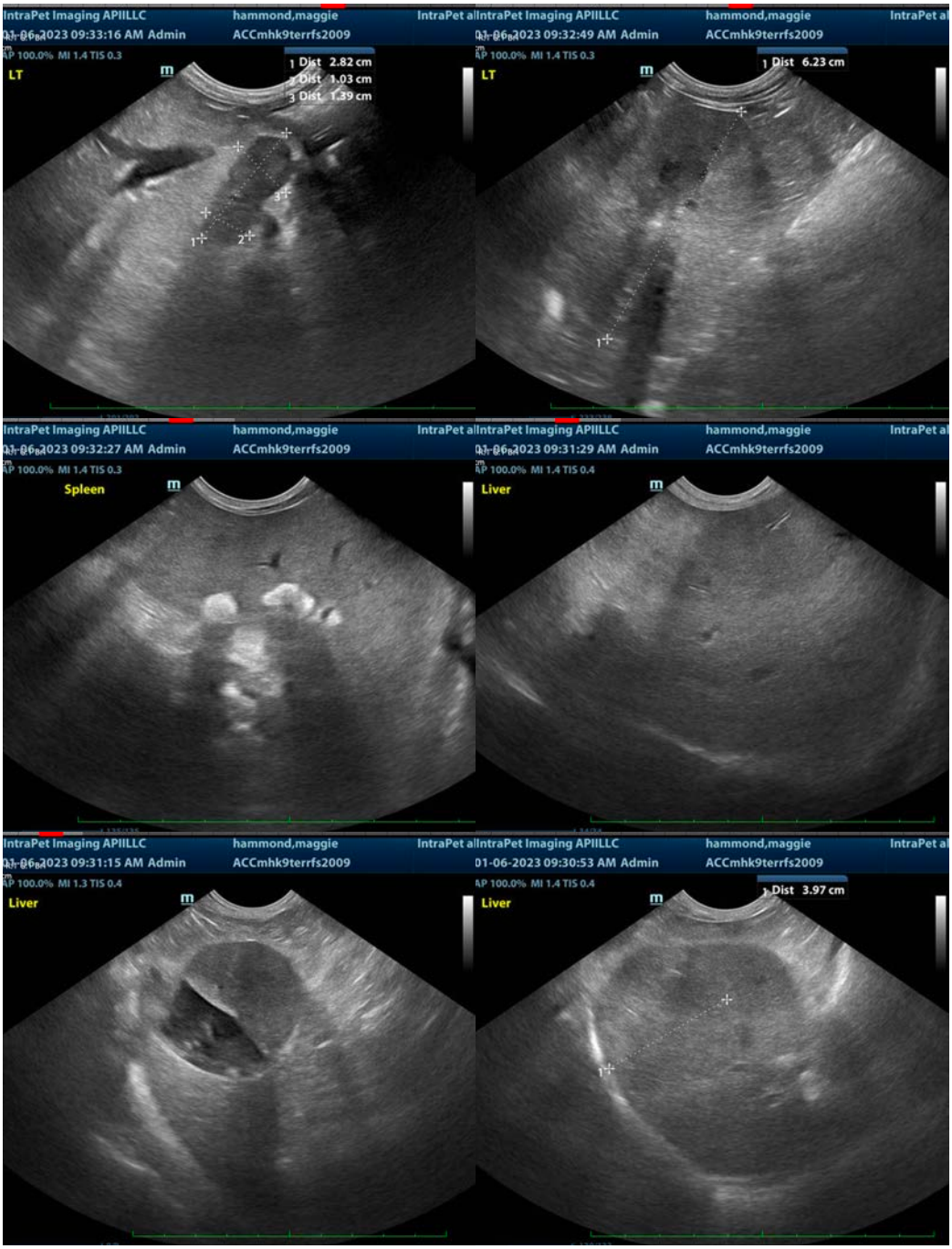
Given this patient's history of hyperadrenocorticism and the suspicion for an intraabdominal thrombus, there are concerns for the hypercoagulable state also having caused a pulmonary thromboembolism, which could have resulted in this patient's reported dyspnea.

If not already evaluated, a blood pressure is recommended, as is a urinalysis, and if protein is present in an otherwise quiet sediment, a urine protein to creatinine ratio to help determine whether or not medical management for proteinuria is recommended.

Regardless, if patient's coagulation status is appropriate, antithrombotic such as low-dose aspirin or Plavix should be considered.

Additionally, a fine needle aspirate of the described liver nodule/mass is recommended if patient's coagulation status is appropriate. However, this is considered likely an incidental finding and not related to the presenting complaint of dyspnea.




IntraPet Imaging APIILLC
hammond,maggie
ACCmhk9terrfs2009
01-06-2023 09:33:16 AM Admin
LT
1 Dist 2.82 cm
2 Dist 1.03 cm
3 Dist 1.39 cm
IntraPet Imaging APIILLC
hammond,maggie
ACCmhk9terrfs2009
01-06-2023 09:32:49 AM Admin
LT
1 Dist 6.23 cm
IntraPet Imaging APIILLC
hammond,maggie
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Spleen
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Liver
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hammond,maggie
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Liver
1 Dist 3.97 cm

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
Beth.Johnson@sonopath.com