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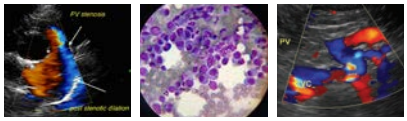

SonoPath

Clinical Sonography & Telecytology

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DATE

6/3/22

PATIENT

Colby Askey

SPECIES

Canine

BREED

Golden Retriever

SEX

Spayed Female

AGE

10/31/09

WEIGHT

54.5 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Greenbrier Vet Clinic

REFERRING VET

Dr. Whitfield

INVOICE

38409

PRESENTING CLINICAL SIGNS

Patient recently suffered suspect CCL tear on LH. On exam, cranial organomegaly was palpable on right. Xrays showed mass effect in right cranial abdomen, suspicious of splenic origin. Chemistry showed mild elevation of ALT , albumin, and lipase. Other than pain and limping associated with CCL injury, patient is clinically doing well.

Current Medications: Gabapentin 12 mg/kg BID prn for pain, started on 5/31/22 Rimadyl 2 mg/kg BID prn, started on 5/31/22 and discontinued the next day, Dasuquin
Lab Results: ALT 150 H, AlkP 70, GGT 2, Albumin 4.0 H, Lipase 1959 H
Radiographs:
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears diffusely thickened and slightly irregular, measuring approximately 0.77 cm in thickness in the apical region. The area of the trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal and free of any mass lesions, calculi, etc. Findings are most consistent with diffuse cystitis or lack of urine distention.

The left kidney has a normal shape and size (7.19 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size 6.98 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large and abnormal in appearance, measuring 5.94 cm x 4.06 cm. It appears irregular and highly vascular with a cavitated region towards the caudal pole measuring 2.6 cm x 1.77 cm. While no obvious vascular invasion is visualized, there is a high concern for this.

The right adrenal gland is normal in size measuring 0.82 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, but slightly irregular. The parenchyma is severely heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. Numerous diffuse, ill-defined, hypoechoic and hyperechoic nodules are noted, varying in size from 0.5-2.0 cm. These do not appear to significantly disrupt the margins of the liver or the architecture.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

There is large, isoechoic, homogeneous mass effect in the right caudal abdomen, measuring approximately 16.79 cm x 10.56 cm. The appearance of this mass lesion is most consistent with fat opacity and an intraabdominal lipoma.

A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Diffusely irregular and thickened urinary bladder wall – findings are most consistent with bacterial cystitis or lack of urine distention. An underlying neoplastic process seems unlikely but cannot be excluded. Recommend urinalysis and culture.

- Large, vascular, irregular adrenal mass (left-sided) – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Large, heterogeneous liver with ill-defined nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The subtle ill-defined nodules likely represent a benign process, but an underlying neoplastic process cannot be definitively ruled out.

- Large right caudal abdominal mass effect – The appearance and echogenicity of this mass is most consistent with an intraabdominal lipoma. Recommend a fine needle aspirate.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large left-sided adrenal mass visualized. This is highly vascular and has a somewhat cavitated caudal pole, which increases concern for possible hemorrhage, rupture, etc. This would be a lesion that I would strongly recommend advanced imaging for possible surgical resection. These are my general recommendations for an adrenal mass:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)

- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication

- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.

- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.

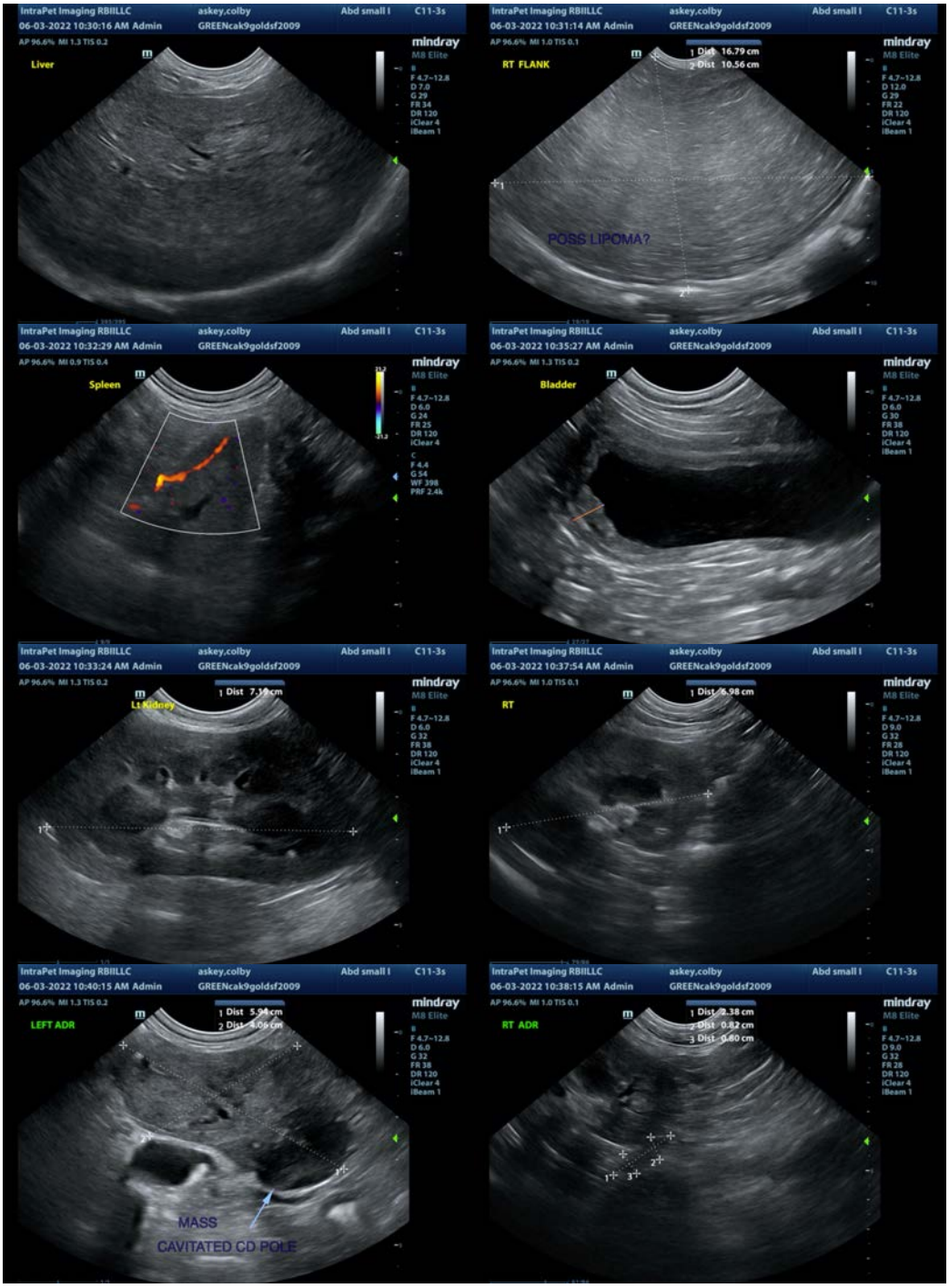
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

The urinary bladder appears somewhat irregular and thickened. Recommend urinalysis and culture to look for evidence of bacterial cystitis.

The liver is large and heterogeneous. This could very well be a vacuolar hepatopathy/steroid hepatopathy secondary to the adrenal mass (if it is actively secreting hormone). If surgery is pursued for the adrenal lesion, recommend a biopsy of the liver. A fine needle aspirate could be considered, provided coagulation parameters are normal.

There is a large, homogeneous, isoechoic mass effect in the right caudal abdomen. This is deviating much of the abdominal contents forward and to the left. This has the general appearance of an intraabdominal lipoma. A fine needle aspirate can be performed to confirm.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Liver
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M8 Elite
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GREENcak9goldsf2009
RT FLANK
1 Dist 16.79 cm
2 Dist 10.56 cm
POSS LIPOMA?
mindray
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M8 Elite
IntraPet Imaging RBIILLC
askey,colby
Abd small I
C11-3s
06-03-2022 10:37:54 AM Admin
GREENcak9goldsf2009
RT
1 Dist 6.98 cm
mindray
M8 Elite
IntraPet Imaging RBIILLC
askey,colby
Abd small I
C11-3s
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LEFT ADR
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2 Dist 4.06 cm
MASS
CAVITATED CD POLE
mindray
M8 Elite
IntraPet Imaging RBIILLC
askey,colby
Abd small I
C11-3s
06-03-2022 10:38:15 AM Admin
GREENcak9goldsf2009
RT ADR
1 Dist 2.38 cm
2 Dist 0.82 cm
3 Dist 0.80 cm
mindray
M8 Elite

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.

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