IMAGING PERFORMED BY

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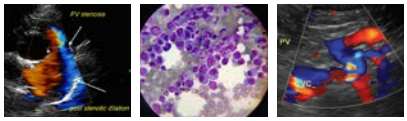

SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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DATE

6/21/22

PATIENT

Zola Emge

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

3/17/17

WEIGHT

61.4 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Thompson

INVOICE

38944

PRESENTING CLINICAL SIGNS

Vomiting, diarrhea, and elevated LE - previous episodes of GI upset over the last several months - was treated supportively and would resolve, then recur – p had BW and x-rays 6/16 at RDVM - no known FB or toxin ingestion - no recent fecal - Diet recently changed to salmon and rice -
Treated supportively in hospital, some improvement at once and home
Did not eat well once home, diarrhea-- recheck this am for US-- 6/21

Current Medications: Denamarin, Gabapentin, Omeprazole, Cerenia.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IV sedation.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (6.54 cm). Overall echogenicity is normal with adequate 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 (6.18 cm). Overall echogenicity is normal with adequate 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 in size measuring 1.11 cm at the cranial pole, 0.72 cm at the caudal pole, and 2.55 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in that the cranial pole is hyperechoic and measures 1.03 cm x 1.07 cm. Findings are most consistent with an ill-defined cranial adrenal nodule.

The right adrenal gland is normal in size measuring 0.70 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. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous hypoechoic nodules visualized within the splenic parenchyma measuring 0.98 cm, 0.71 cm, and 1.37 cm.

Liver

The liver is large in size, hypoechoic, and somewhat irregular in shape. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. While no overt mass lesions or nodules are visualized, the right side of the liver appears somewhat rounded, but is isoechoic to the rest of the liver. This is likely an anatomic variant, but a very ill-defined mass lesion cannot be excluded as a possibility.

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 normal and isoechoic to surrounding 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. There is a severe caudal abdominal lymphadenopathy with sublumbar lymph nodes measuring 1.54 cm and 1.96 cm in width. They are rounded, prominent and hypoechoic, measuring 1.54 cm and 1.96 cm in width. Additionally, there is a mesenteric lymph node measured at 0.92 cm, and a lymph node at the root of the mesentery measuring 2.21 cm x 2.0 cm. The omentum is hyperechoic around the enlarged lymph nodes.

Other

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

PRIMARY FINDINGS

- Hyperechoic nodule on the cranial pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Mottled spleen with hypoechoic nodules – There are multiple non-cavitated, hypoechoic splenic nodules visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

- Severe mesenteric lymphadenopathy – The severe mesenteric lymphadenopathy is most concerning for a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease(tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

SECONDARY FINDINGS

- Heterogeneous/hypoechoic liver with rounded caudal right margins – The significance of this is unclear. This could represent a normal anatomic variation, less likely an ill-defined mass lesion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a severe sublumbar lymphadenopathy present with large, hypoechoic rounded lymph nodes. There are other less dramatic mesenteric lymph nodes that appear enlarged as well. Recommend a digital rectal exam to palpate the anal glands in the sublumbar area. Recommend a fine needle aspirate of an enlarged lymph node.

Additionally, there are hypoechoic nodules within the spleen. Recommend a fine needle aspirate of a splenic nodule.

The cranial pole of the left adrenal gland is enlarged and hyperechoic, creating an ill-defined nodule. No obvious vascular invasion is noted. These types of nodules can be benign or malignant, and can secrete hormones or be non-active. Options moving forward include:

- 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 or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)

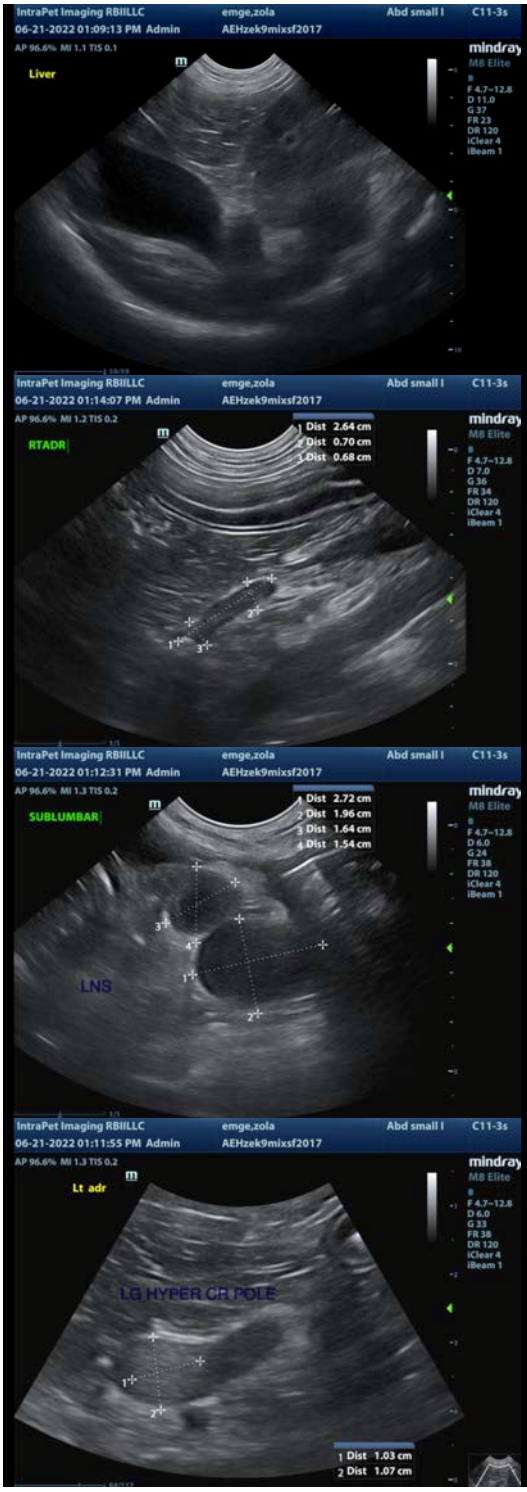
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).

- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

The significance of the adrenal nodule is unclear, but there is a strong possibility that it is not related to the vomiting and diarrhea reported.

The caudal aspect of the liver has a large isoechoic bulge that appears very uniform with the rest of the liver. This could represent an anatomic variation and shape, or an isoechoic mass lesion. Options moving forward would include continued monitoring, a fine needle aspirate of the rounded area of liver, or even a contrast CT scan (particularly if the left adrenal gland is being imaged) to further evaluate this area. Subjective evaluation trends towards a more benign anatomical variation.


IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
06-21-2022 01:09:13 PM Admin
AEHzek9mixsf2017
Liver
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
06-21-2022 01:10:17 PM Admin
AEHzek9mixsf2017
Spleen
1 Dist 0.98 cm
2 Dist 0.71 cm
3 Dist 1.37 cm
HYPO NODULES
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
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RTADR
1 Dist 2.64 cm
2 Dist 0.70 cm
3 Dist 0.68 cm
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
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AEHzek9mixsf2017
RT
1 Dist 6.18 cm
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
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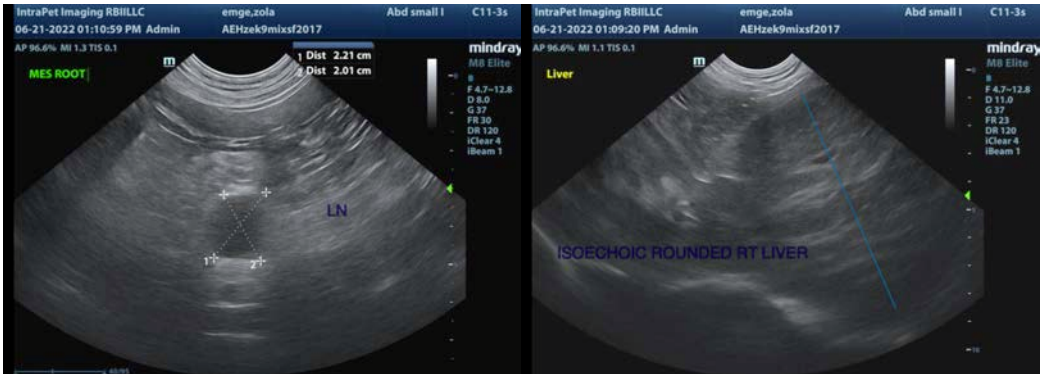
AEHzek9mixsf2017
SUBLUMBAR
1 Dist 2.72 cm
2 Dist 1.96 cm
3 Dist 1.64 cm
4 Dist 1.54 cm
LNS
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
06-21-2022 01:11:55 PM Admin
AEHzek9mixsf2017
Lt adr
1 Dist 2.79 cm
2 Dist 0.72 cm
3 Dist 1.06 cm
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
06-21-2022 01:11:55 PM Admin
AEHzek9mixsf2017
Lt adr
LG HYPER CR POLE
1 Dist 1.03 cm
2 Dist 1.07 cm
IntraPet Imaging RBIILLC
emge,zola
Abd small I
C11-3s
06-21-2022 01:11:34 PM Admin
AEHzek9mixsf2017
Lt Kidney
1 Dist 6.54 cm
2 Dist 0.52 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.

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