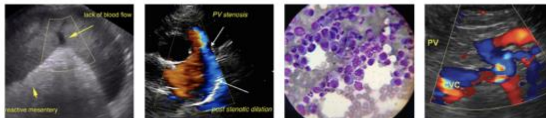


PATIENT

Bella Wade

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

7 years

WEIGHT

18.5 lbs

INTERPRETED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

IMAGING PERFORMED BY

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

HOSPITAL NAME

Flowertown AH

REFERRING VET

Dr. Nawa

INVOICE

10750

DATE

4/15/22

PRESENTING CLINICAL SIGNS

History: Came in for an annual exam. History of seizures. Is on phenobarbital and is Zonisamide and had elevated liver values on basic blood-work. ALP 1084. ALT 171. CBC unremarkable. History of idiopathic epilepsy, allergies and Entropian, pyoderma, dental disease and is overweight. Phenobarbital level is in the therapeutic range. Liver values have gone up in the past years.

ASSESSMENT: history of epilepsy, dental tartar, entropion,fracture 109

Abnormal labwork values: ALT = 171 2019 was 28. ALP 1084 2019 was 40

Current Medications: Phenobarbitol 15mg AM, 30mg PM; Zonisamide 50mg SID; Sentinel Q30d
Fine Needle Aspirates: Client approved Sedation and FNA Consent

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is normal in size (4.27 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A few tiny, nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (4.60 in cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

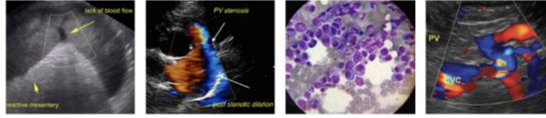
Adrenal Glands

The left adrenal gland is normal size (0.30 cm at cranial pole) (0.26 cm at caudal pole) (1.45 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.49 cm at cranial pole) (0.30 cm at caudal pole) (1.54 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.38 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.



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Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate to large amount of aggregated, echogenic, suspended sludge, in a partially stellate pattern is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

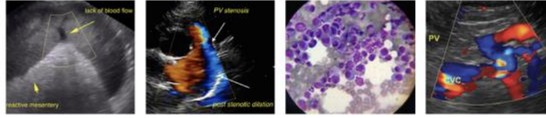
- The gall bladder changes are suggestive of a developing mucocele.
- The mild hepatomegaly in conjunction with the elevated ALP suggests benign hepatopathy (i.e., secondary to phenobarbital therapy, idiopathic vacuolar hepatopathy and/or regenerative nodular hyperplasia). Given the minimal elevation in ALT, and inflammatory hepatopathy is considered unlikely. Given the sonograph changes, neoplasia is also considered unlikely.

Secondary Findings

- Minor age-related renal changes with nonobstructive nephrocalcinosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the gall bladder changes, Ursodeoxycholic acid (Ursodiol) at 10-15 mg/kg once a day is recommended. In general, serial sonographic monitoring (e.g., every 6-8 weeks) of the gall bladder is recommended to assess for progression to a fully-formed mucocele. However, it



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may be useful to recheck an ultrasound and liver values in 4-6 weeks. If the ALP continues to rise but the mucocele appears stable, consider slowly weaning the patient off phenobarbital (and initiate Levetiracetam in its place).

- In general, serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.

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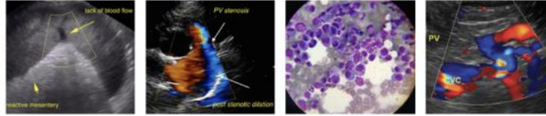

Charleston Mobile Veterinary Services

IMAGING PERFORMED BY
CharlestonMobile.Net 800.403.5408

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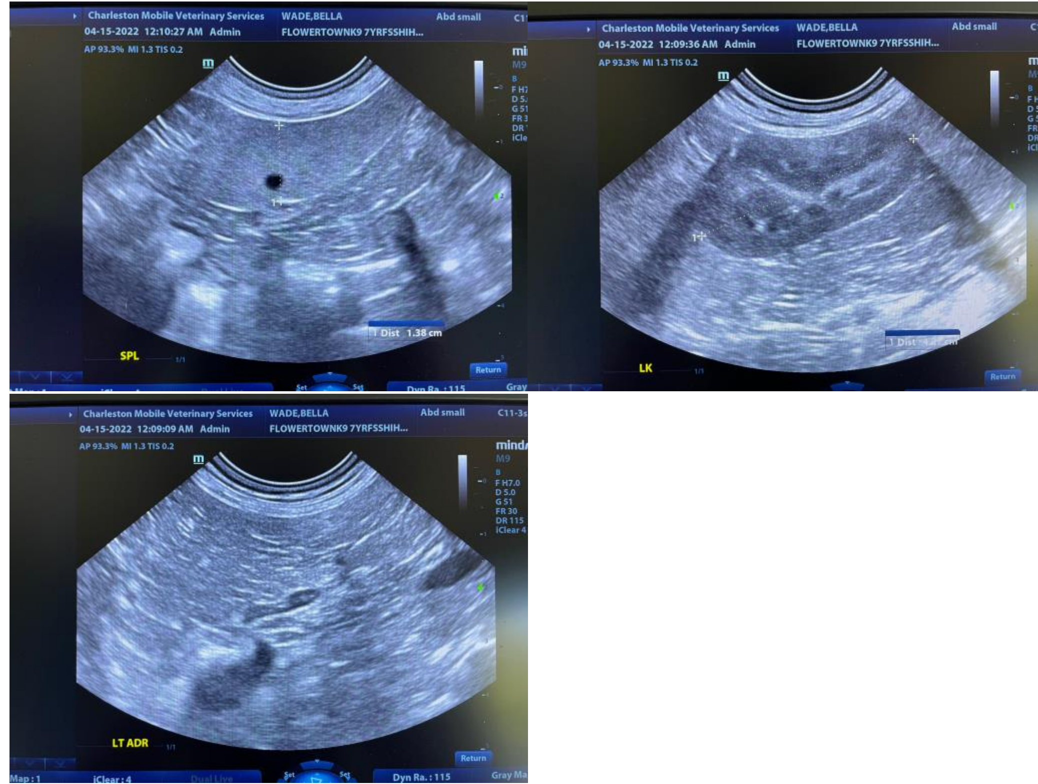

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com