



PATIENT

Harlowe Berberoglu

SPECIES

Canine

BREED

Shih Tzu

SEX

Female, spayed

AGE

9/3/2011

WEIGHT

16.5 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

VC of Myrtle Beach

REFERRING VET

Dr. Boland

INVOICE

13615

DATE

3/18/26

PRESENTING CLINICAL SIGNS

Pt presented with a grade IV/VI murmur. Pt receiving Temaril P.

ALT = 432 (was 332 on 7/19/25, 74 on 11/3/21)
ALKP = 5824 (was 1081 on 7/19/25, 560 on 11/3/21)
r/o primary liver (infection, inflammation, neoplasia) vs. cholangiohepatitis vs. steroids vs. open
All other chems and cbc wnl.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The left kidney is normal size (4.15 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is mild to moderate to severe loss of corticomedullary distinction. An ill-defined hyperechoic medullary band is observed at the corticomedullary junction. Mild to moderate pyelectasia is present (0.28 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (4.45 cm in length); normal shape and architecture with smooth peripheral margins. The cortex is mildly thickened and there is moderate loss of corticomedullary distinction. An ill-defined hyperechoic medullary band is observed at the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (0.71 cm at cranial pole) (0.63 cm at caudal pole) with swollen peripheral contours. A 1.22 x 0.71 cm hyperechoic nodule is observed at the cranial pole. The glandular echogenicity and detail at the caudal pole are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is enlarged (0.72 cm at cranial pole) (0.44 cm at caudal pole) with swollen peripheral contours. A 0.67 x 0.58 cm hyperechoic to heterogeneous nodule is observed at the cranial pole. The glandular echogenicity and detail at the caudal pole are unremarkable. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.11 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. A 0.62 cm ill-defined hyperechoic nodule is observed approximately mid-spleen. Splenic vasculature is normal.

Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic 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 small to moderate amount of mobile echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.



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Gastrointestinal

The gastric lumen is not distended. 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 is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The right limb of the pancreas is prominent with normal curvilinear peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Lymph nodes

The abdominal lymph nodes are normal/not visible.

Free Abdomen

There is no obvious evidence of free fluid.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

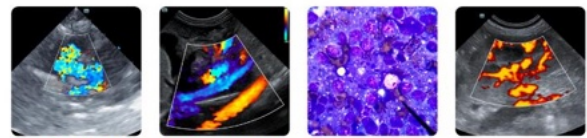
- The hepatic changes are nonspecific and could be secondary to inflammatory disease (i.e., cholangiohepatitis, chronic hepatitis), Leptospirosis, hepatotoxicosis, infiltrative neoplasia (i.e., lymphoma), vacuolar hepatopathy, other hepatopathy, or some combination thereof.
- Gallbladder debris, non-mucocele
- Mild bilateral adrenomegaly. The bilateral adrenal nodules could be consistent with focal nodular hyperplasia, adenomas, emerging adenocarcinomas, pheochromocytomas, other.

Secondary Findings:

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral nonspecific, age-related renal changes with left pyelectasia. The pyelectasia may be secondary to pyelonephritis, parenchymal remodeling, PU/PD (if applicable) or some combination thereof.
- The hyperechoic splenic nodule likely represents a benign meylolipoma with a lower possibility of more insidious splenic pathology.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. A fine needle aspirate using a 25-gauge needle is recommended. If cytologic evaluation is inconclusive or if a more aggressive approach is desired, consider laparoscopic or surgical liver biopsies with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
2. If a conservative approach is desired, consider empirical treatment for bacterial



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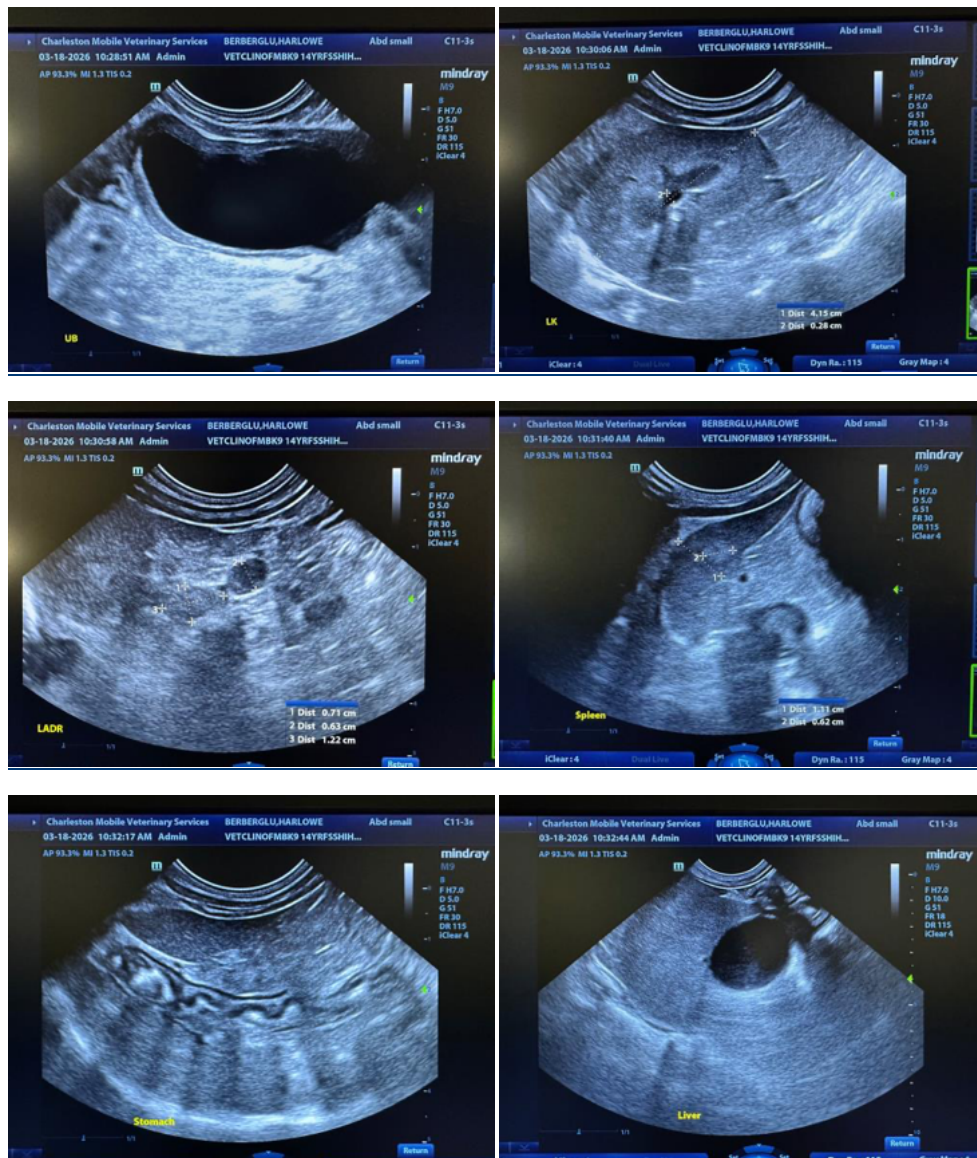
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cholangiohepatitis (amoxicillin-clavulanic acid, Denamarin). If no improvement in the liver values is seen within 7-10 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling reconsidered. If liver values improve, continue therapy for at least 4-6 weeks and 1 week beyond normalization of the liver values.

3. Leptospirosis testing (i.e., blood and urine PCR, serology) can be considered particularly if clinical suspicion for disease is high.
4. Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.





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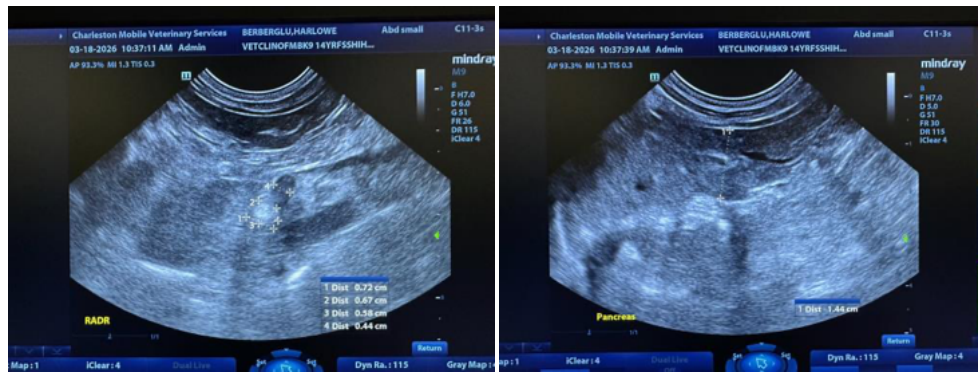
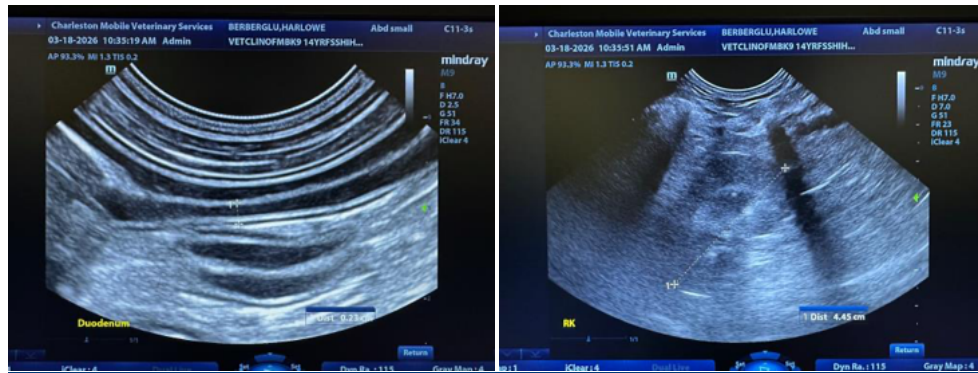
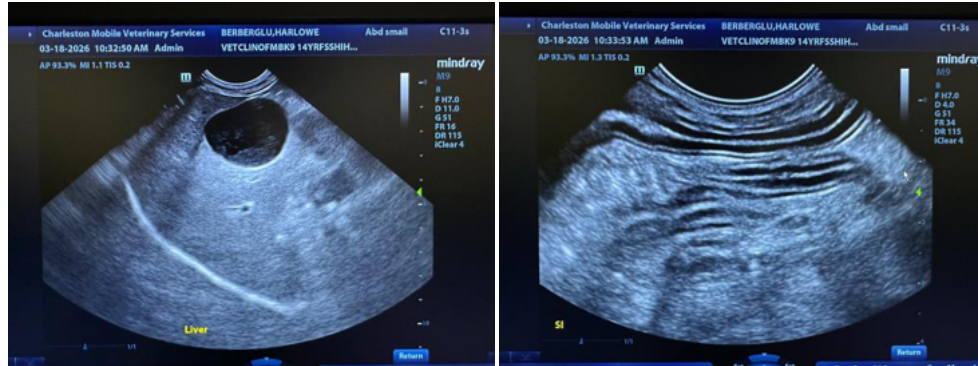
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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