



PATIENT PRESENTING CLINICAL SIGNS

Tipy Brogdon

Tippy is a 13Y FS Mix breed presenting as a DT for elevated liver enzymes. O says starting about 5 days ago, P began to vomit yellow bile and foam. P ha progressively showed less interest in food since a dental extraction at the end of Feb. this year, O has been feeding soft food, but P has shown no interest over the last 5 days. P ate a small amount of red meat today. P seemed very lethargic and continued vomiting this morning, O took P to rDVM and had bloodwork done that showed elevated liver values. P is here for continued care and monitoring. P is still having normal bowel movements and urinating as normal.

SPECIES

Canine

BREED

Mixed breed

UTD on vaccines and preventions, no current medications

SEX

Female, spayed

medical hx:
-Dental extractions in Feb 2022
-Acanthoma in left ear Nov. 2021

AGE

2/4/2009

On rDVM blood work
ALT >2000 (H)
ALP >2400 (H)
Tbili 5.9 (H)
Lymph 0.78 (L)

WEIGHT

18.5 kg.

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 size (5.90 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (7.36 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.51 cm at cranial pole) (0.60 cm at caudal pole); 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 (0.94 cm at cranial pole) (0.64 cm at caudal pole) (2.48 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

INTERPRETED BY

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

IMAGING PERFORMED BY

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Medicine)

HOSPITAL NAME

Blue Pearl

REFERRING VET

Dr. Fraser

INVOICE

13272

DATE

4/26/22



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The spleen is normal in size (1.78 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.

Liver

The liver is subjectively prominent in size with slightly swollen peripheral contours. The parenchyma is hypoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A scant amount of suspended echogenic debris 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 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 thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

Pancreas

The left limb of the pancreas is prominent to enlarged with irregular peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat and mottled, bordering on nodular in appearance. The right limb is slightly hyperechoic relative to surrounding omental fat and is also mottled in appearance. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic 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:

- Given the patient's clinical history and sonographic liver changes, top differentials include an inflammatory hepatopathy (i.e., bacterial cholangiohepatitis, chronic active hepatitis), Leptospirosis, hepatotoxicosis (i.e., copper) or less likely, infiltrative neoplasia. Concurrent benign age-related changes (i.e., remodeling, regenerative nodular hyperplasia, vacuolar hepatopathy) may also be present.
- The pancreatic changes are suggestive of chronic pancreatitis with age-related remodeling +/- nodular hyperplasia. Pancreatic neoplasia is possible but considered less likely.



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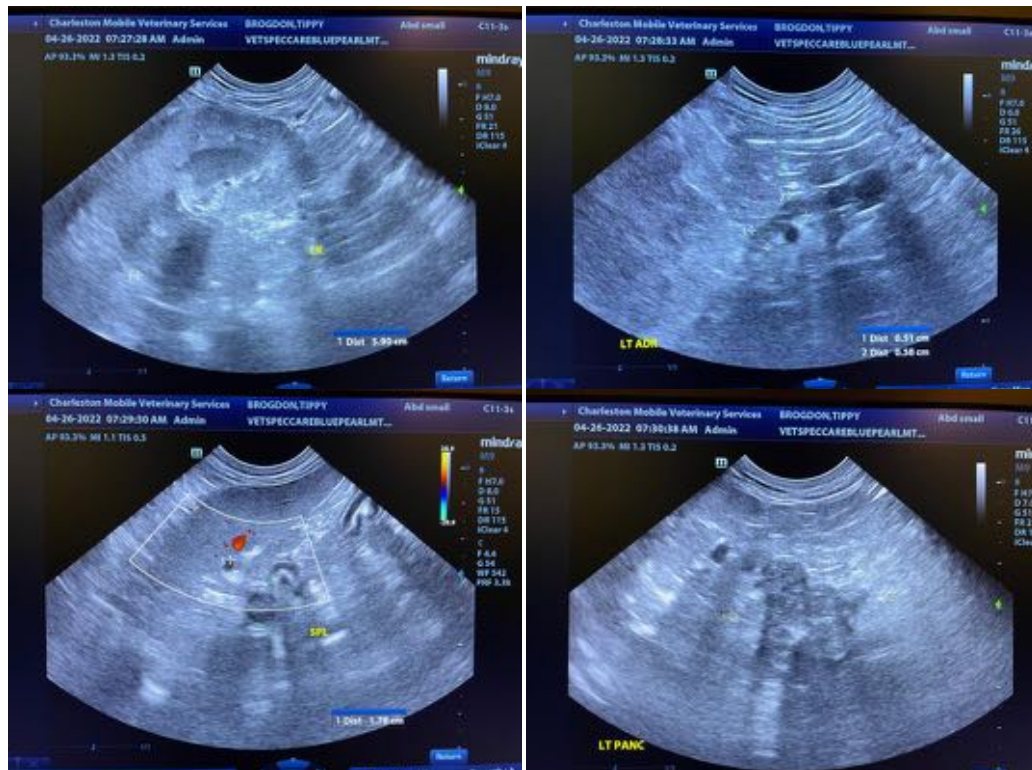
4/26/22

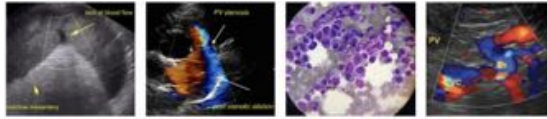
Secondary Findings:

- Bilateral, chronic age-related renal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Leptospirosis testing including blood and urine PCR, serology.
- Hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy) can be considered if clotting status is appropriate. Surgical biopsies are preferred in that they are more likely to be representative of global organ pathology. If surgery is pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation should be obtained. In the meantime, empirical treatment for bacterial cholangiohepatitis/Leptospirosis (i.e., amoxicillin clavulanic acid, +/- metronidazole, Denamarin) is recommended as well as supportive care.
- Given the patient's age, three-view thoracic radiographs are recommended to assess cardiopulmonary status.





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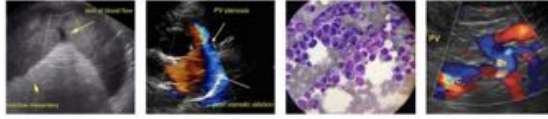
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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Andrea.Nicastro@CharlestonMobile.net

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