



PATIENT PRESENTING CLINICAL SIGNS

Fergie Ruocco History: Intermittent, chronic pancreatitis with hepatopathy. Current meds: Carafate, Cerenia, Metronidazole, Denamarin Advanced DMG.

SPECIES Abnormal PE/Chem/CBC/UA Results: ALP 441, ALT 140, CpLi: abnormal.

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Urinary System

BREED The urinary bladder is mildly to moderately distended with anechoic urine. The wall in the region of the apex is mildly thickened (up to 0.34 cm) with a smooth mucosal surface. The wall tapers to a normal thickness at it extends toward the cystourethral junction. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

SEX The left kidney is normal in size (4.52 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.

Female Spayed

AGE

9 years The right kidney is normal in size (4.16 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

19.4 lbs

Adrenal Glands

The left adrenal gland is enlarged (0.53 cm at cranial pole) (1.60 cm at caudal pole) (2.91 cm in length) with an irregular shape. A 1.53 x 0.92 cm hyperechoic nodule is observed at the cranial pole. In addition, a 1.77 x 1.50 cm hyperechoic nodule/mass is observed at the caudal pole. The phrenicoabdominal vein and surrounding vasculature appear normal.

INTERPRETED BY

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The right adrenal gland is mildly enlarged (0.63 cm at cranial pole) (0.87 cm at caudal pole) (1.80 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. Surrounding vasculature appears normal.

IMAGING PERFORMED BY

Kelly Vazquez

Spleen

The spleen is subjectively normal in size (1.08 cm in width at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is diffusely mottled with several ill-defined hypoechoic nodule/areas throughout the organ. Splenic vasculature appears normal with no evidence of thrombosis.

HOSPITAL NAME

Legacy AH

Liver

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and subtly mottled in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

REFERRING VET

Kristin Pontenzone

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

INVOICE Gastrointestinal

12690 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 is normal in

DATE

4.7.23

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

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic 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.

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Inflammatory and infiltrative disease are considered less likely.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral adrenomegaly. The left adrenal nodules could be consistent with benign macronodular hyperplasia or tumors (i.e., adenoma, adenocarcinoma, pheochromocytoma).

Secondary Findings

- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- The urinary bladder wall changes could be consistent with cystitis or may be artifactual due to lack of full repletion. Correlation with the patient's urinalysis findings and clinical history is recommended.
- Minor bilateral age-related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the left adrenal lesions, 3-view thoracic radiographs are recommended to assess for pulmonary metastatic disease. Also consider testing for functional tumors (i.e., low-dose dexamethasone suppression test, urine/blood catecholamine levels (Marshfield Lab), particularly if clinical signs are present. A baseline blood pressure measurement is also recommended.
- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.
- Given the history of chronic pancreatitis, a prescription low-fat diet is recommended for long-term maintenance, along with symptomatic care as needed.

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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