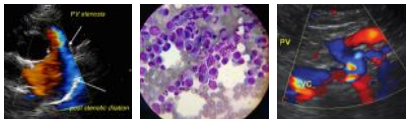
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE

4/28/2022

PATIENT

Jack Peil

SPECIES

Canine

BREED

Dachshund Mix

SEX

Neutered Male

AGE

10/1/2006

WEIGHT

16.1 lbs

INTERPRETED BY

Andrea Nicastro, DMV, Diplomate DACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Healing Paws Veterinary Wellness Center

REFERRING VET

Dr. Levitsky

INVOICE

10825

PRESENTING CLINICAL SIGNS

Hx of IVDD and heart dz- degenerative valve dz. Liver values have been slowly increasing despite diet changes and supplements.

Current Medications: Pimobendan 1.25mg SID, Hydroxyzine 10mg BID, Methocarbamol/Tramadol prn for back pain, Denamarin, other herbal supplements.
Lab Results: 9/19 ALKP 137, ALT 110. 1/20 ALKP 279, ALT 127. 2/20 ALKP 298, ALT 127, GGT 9, T4 0.8, FT4 14.4. 4/20 ALKP 149, ALT 250, GGT 15, T4 1.1, FT4 8.8. 2/21 ALKP 316, ALT 190. 7/21 ALKP 56, ALT 128. 3/22 ALKP 986, ALT 322.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

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 prostate is normal in size (0.95 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney presented normal size (4.59 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. A 1.54 cm cortical cyst is observed at the medial aspect. Mild pyelectasia is present (0.16 cm in the longitudinal plane). There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (4.98 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged with a mass effect (2.17 cm at cranial pole) (2.14 cm at caudal pole) (3.06 cm in length). The gland is irregular in shape. The parenchyma is heterogenous, with a 1.45 cm mineralized area near the caudal aspect. The gland is hypervascular. There is no obvious evidence of vascular invasion.

The right adrenal gland is enlarged (2.36 cm at cranial pole) (2.05 cm at caudal pole) (3.49 cm in length); with an irregular shape and a mass effect. The parenchyma is heterogenous, with loss of glandular detail. A few hyperechoic to mineralized areas are observed, the largest measuring 1.47 cm in diameter. There is no obvious evidence of vascular invasion.

Spleen

The spleen is mildly enlarged (1.55 cm in width at the level of the hilus) with swollen, slightly undulating peripheral contours. A 3.61 x 2.15 cm isoechoic swelling/bulge is observed at the craniomedial aspect. The parenchyma is diffusely mottled and heterogenous in appearance. Splenic vasculature is normal with no

evidence of thrombosis.

Liver
The liver is subjectively enlarged with rounded, peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely mottled in appearance, with at least one, small hypoechoic nodule/area on the left side. A 0.84 cm irregular, hyperechoic nodule is also observed on the right side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is distended. The wall is normal in thickness. 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 not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. 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 or overt infiltrative disease is noted.

Pancreas
The pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. 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.

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

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Gall bladder changes are suggestive of a developing mucocele.
- The diffuse hepaticic parenchymal changes are nonspecific, and could be associated with vacuolar hepatopathy, regenerative nodular hyperplasia, inflammatory disease, hepatotoxicosis (i.e., copper), infiltrative neoplasia (less likely), or other hepatopathy.
- Bilateral adrenal tumors with areas of suspected mineralization. Differentials include neoplasia (i.e., adenomas, adenocarcinomas, pheochomocytomas) versus excessive nodular hyperplasia.
- The splenic parenchyma changes, , including the swelling/bulge, are nonspecific and could be secondary to a benign process (i.e., lymphoid hyperplasia, extramedullary hematopoiesis, splenitis, antigenic stimulation). Alternatively, infiltrative neoplasia (i.e., round cell tumor) may be present.

Secondary Findings

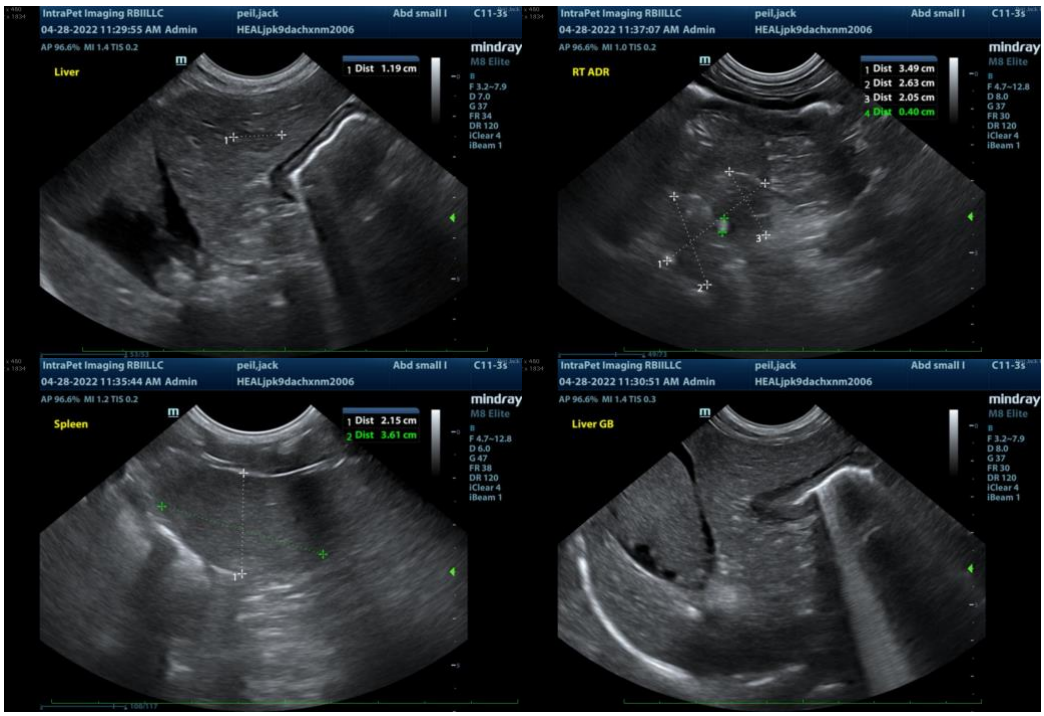
- Bilateral chronic renal changes with left pyelectasia

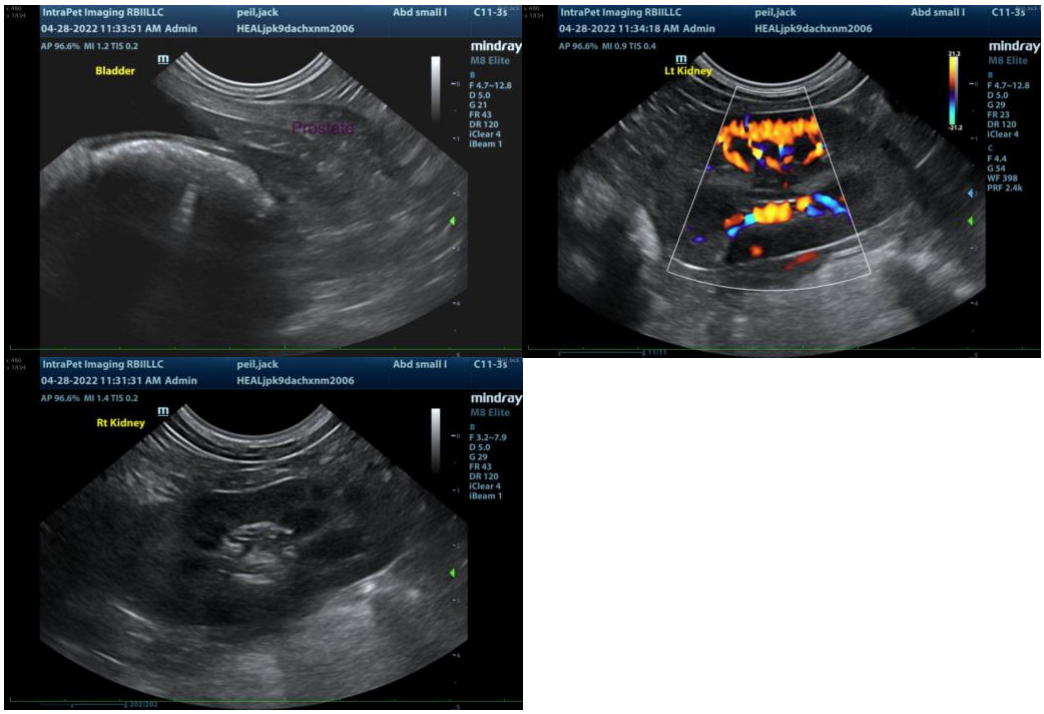
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Consider fine-needle aspirates of the spleen (with particular attention to the swollen area) and liver can be considered to further evaluate for infiltrative neoplasia. With regard to the liver, a liver biopsy may ultimately be necessary to get a definitive diagnosis. If pursued, a prophylactic cholecystectomy can be considered along with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for potential copper quantitation. In the meantime, consider initiation of Ursodiol therapy with serial sonographic monitoring (i.e., every 6-8 weeks) to assess for progression to a fully-formed mucocele.

Given the bilateral adrenal masses, consider the following:

1. Thoracic radiographs to assess for metastatic disease
2. Baseline blood pressure measurement
3. Further testing for functional adrenal tumors (i.e., low-dose dexamethasone suppression test, urine/blood catecholamine levels (Marshfield Laboratory)).





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, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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