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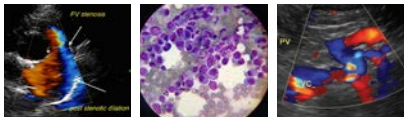

SonoPath

Clinical Sonography & Telecytology

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DATE

11/29/22

PATIENT

Rocco Patel

SPECIES

Canine

BREED

Miniature Pinscher

SEX

Neutered Male

AGE

6/16/09

WEIGHT

34.8 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

IMAGING PERFORMED BY

Stephanie Warga RDCS, RVT

HOSPITAL NAME

North East AH

REFERRING VET

Dr. Hanlin

INVOICE

42996

PRESENTING CLINICAL SIGNS

8/18/22- presented with dry unproductive cough. Occurs later in day. Normal heart rhythm. No murmur, lungs clear, slight cough with tracheal palp. Rule out allergies, bronchitis, tracheal collapse. Occult heart disease. 9/23/22 recheck after meds- some improvement. Cxr- bronchial pattern, mild. Normal cardiac size. X-ray findings, focal density caudal to heart. Hepatomegaly concern for neoplasia. Possible mass.

Current Medications: 8/18/22- Prednisone 10mg, Hydroxyzine 25mg for 2 weeks. 9/23/22- cough tabs ½ every q4-6 hrs.

Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.44 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The prostate is normal in size (0.76 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.89 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.80 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.60 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.65 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

Liver
The liver is large in size, with normal echogenicity and smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal
The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.32 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen
Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Thorax
On brief evaluation of the heart, there is no evidence of pericardial effusion. No mass lesions observed. Contractility appears subjectively normal.

On evaluation of the thorax, there is no evidence of pleural effusion visualized and no clear evidence of a mass effect caudal to the heart, between the heart and the diaphragm.

PRIMARY FINDINGS

- Subjectively thickened/irregular urinary bladder wall – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.

- Decreased corticomedullary distinction in both kidneys with pinpoint non-obstructive nephroliths – The bilateral renal findings are consistent with age-related change.

- Large, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or

other hepatopathy.

SECONDARY FINDINGS

- Hyperechoic, irregular foci visualized in the spleen – Findings are most consistent with benign myelolipomas.

- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

- Moderate ingesta within the gastric lumen – Correlate with feeding history. If the patient was adequately fasted, consider delayed gastric emptying or partial outflow tract obstruction (none observed).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

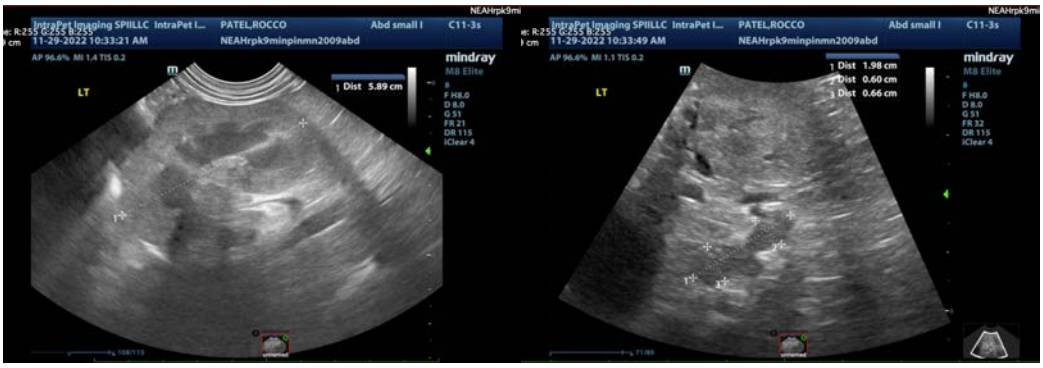
No focal mass lesions are observed in the abdomen or in the thoracic cavity. If concern for an intrathoracic lesions persist, then consider a contrast CT scan of the thorax, as this will provide greater sensitivity for evaluation of smaller lesions.

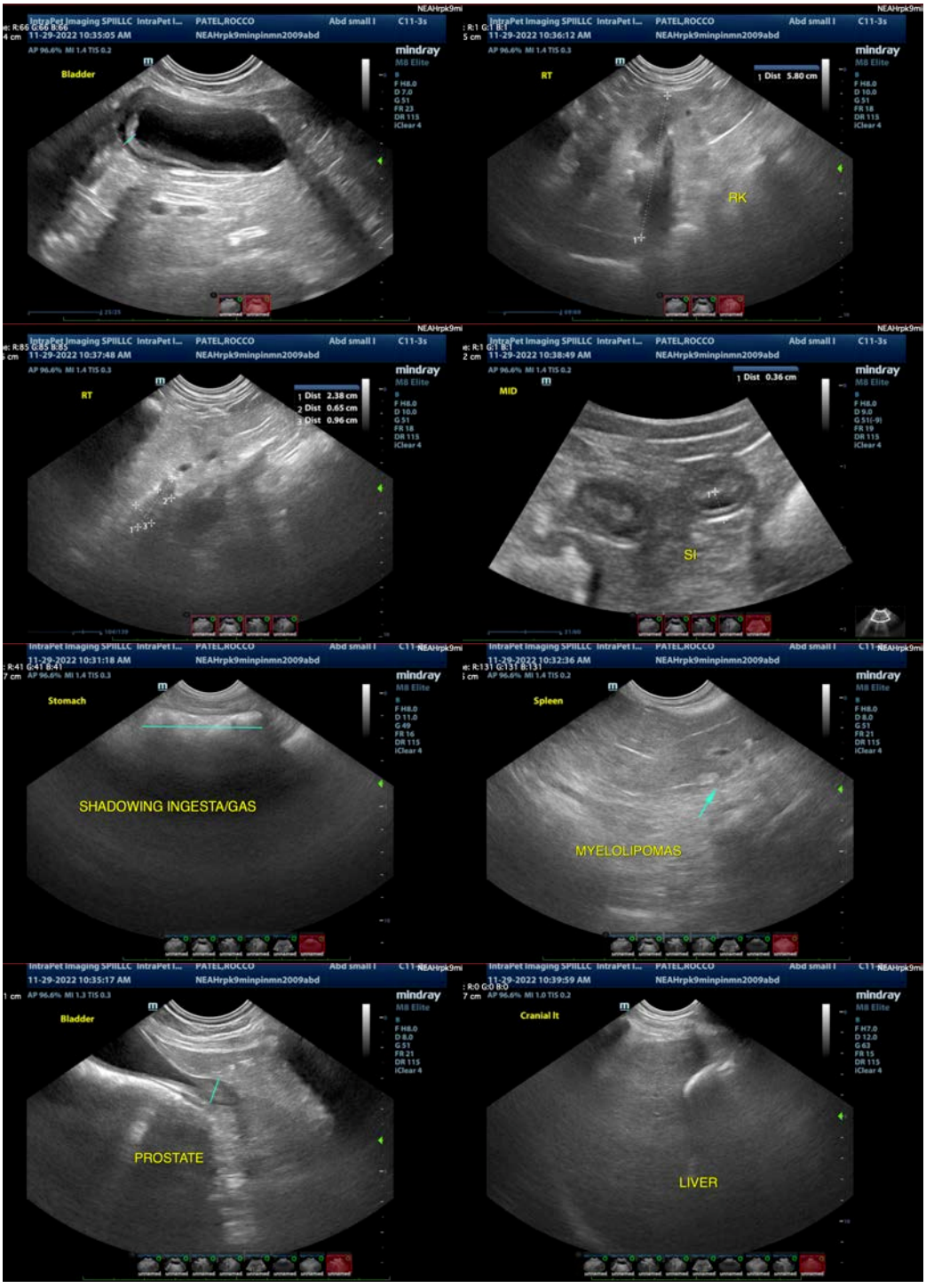
Both kidneys have decreased corticomedullary distinction and small non-obstructive pinpoint nephroliths. These findings are most consistent with age related renal disease. Consider a blood pressure and urinalysis/culture to obtain a baseline.

Additionally, the urinary bladder wall is slightly irregular. This could be consistent with cystitis or lack of urine distention.

The liver appears large and heterogeneous, almost nodular in appearance. I suspect this is consistent with a vacuolar hepatopathy/age related change, etc. Correlate with bloodwork findings. If liver enzymes are significantly elevated, you could consider a liver function test and a fine needle aspirate.

Although there is no evidence of obvious cardiac disease on the brief evaluation, you could consider a full echocardiogram to obtain measurements and look for evidence of pulmonary hypertension, etc. due to the cough. If this persists, you could also consider bronchoscopy to both evaluate for tracheal collapse and to obtain a wash sample, looking for inflammation, infection, etc.




Bladder
RT
1 Dist 5.80 cm
RK
RT
1 Dist 2.38 cm
2 Dist 0.65 cm
3 Dist 0.96 cm
MID
1 Dist 0.36 cm
SI
Stomach
SHADOWING INGESTA/GAS
Spleen
MYELOLIPOMAS
Bladder
PROSTATE
Cranial lt
LIVER

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com