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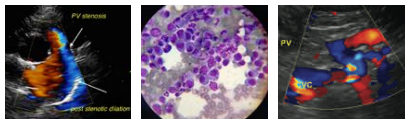

SonoPath
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DATE
10/22/21

PATIENT
Bubba Kelly

SPECIES
Canine

BREED
Pekingese

SEX
Neutered male

AGE
10/21/08

WEIGHT
18.2 lbs

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

HOSPITAL NAME
Animal Emergency Hospital

REFERRING VET
Dr. Ruby

INVOICE
92570

PRESENTING CLINICAL SIGNS

History: **Date:** 10-21-2021 **Notes:** Very lethargic, Anorexia, Regurg, seen by RDVM today. BW and x-rays done- Elevated LE, increased WBC's, cPl normal. Referral for supportive care, hepatobiliary US tomorrow. **Assessment:** Regurgitation, Elevated LE, Abd pain. **Recommend to Owner**: Hospitalization, IV catheter, fluid therapy, Ab's, GI meds, pain meds, US and further treatment as needed. Owner authorizes recommended treatment. Prognosis: Guarded.
Current Medications: Not provided by the veterinarian.
Lab Results: Elevated LE, increased WBC's, cPl normal.
Radiographs: Not provided by the veterinarian.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Sedation not required for scan.
Stat Report: STAT report not requested by the veterinarian.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is somewhat prominent in size measuring 1.1 cm. It is relatively uniform in shape. The parenchyma is largely homogenous, but there are numerous, hyperechoic, shadowing foci most consistent with pinpoint mineralization/small stones. The external margins appear smooth. The prostatic urethra largely appears normal, but there is a mineralization in the area of the junction of the prostatic and post prostatic urethra. This may be intraparenchymal mineralization or an intraluminal stone. There was no evidence of a urinary obstruction observed.

The left kidney has a normal shape and size (4.55 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Numerous cortical cysts and a large cortical cyst was noted in the cranial pole measuring 1.74 cm. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.04 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Numerous, small cortical cysts were noted. 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 0.63 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 0.51 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, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver
The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling and small, hyperechoic shadowing foci that is most consistent with intrahepatic stones. The visible portions of the vasculature appear normal and the distal intrahepatic biliary tract appears somewhat dilated. Several, indistinct, hypoechoic nodules are visualized within the parenchyma and measured 1.25 cm and 1.01 cm. The gallbladder lumen is moderately distended. The wall of the gallbladder has occasional, irregular, polypoid projections and there is a moderate amount of non-organized, echogenic and mineralized debris present. The common bile duct appears dilated and measures 0.81 cm distal to the liver and 0.61 cm hyperechoic shadowing stone is visible in the distal common bile duct at the level of the duodenal papilla.

Gastrointestinal
The stomach contains minimal luminal contents. 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 layers 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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.

ULTRASONOGRAPHIC FINDINGS
PRIMARY FINDINGS:

- Heterogenous liver with intrahepatic stones and hyperechoic nodules. 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.

- Gallbladder debris with small polyps, dilated common bile duct with a distal biliary stone. The findings are most consistent with a partial biliary obstruction.

- Prominent prostate with pinpoint mineralization/stones. Correlate these findings with the age of neutering. Consider a FNA of the prostate if neoplasia is of concern.

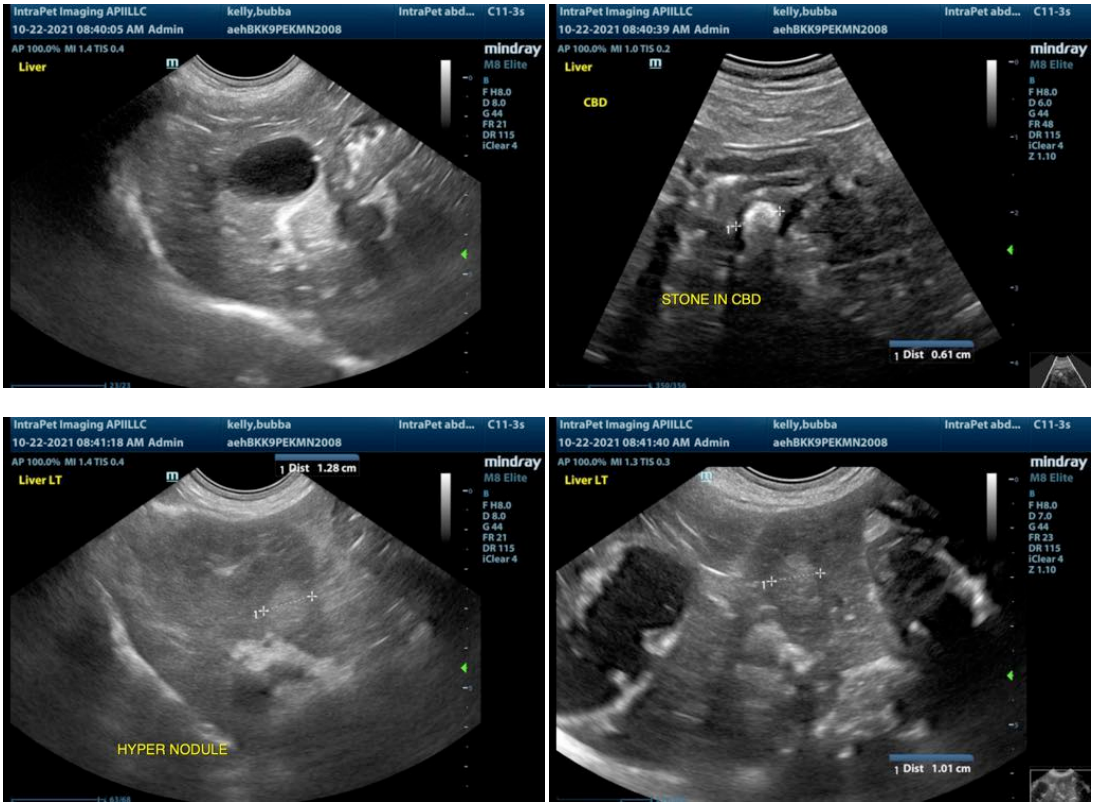
- Decreased corticomedullary distinction in both kidneys with cortical cysts present. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

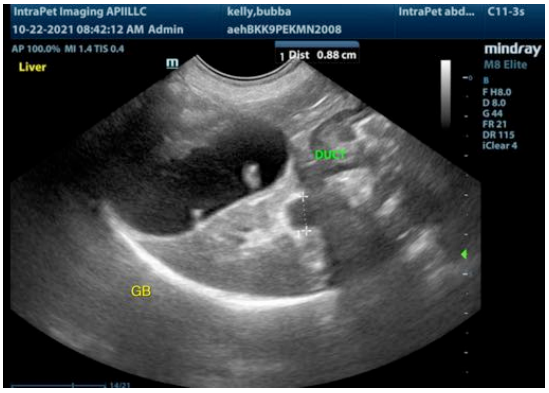
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There appear to be stones within the liver itself, gallbladder and a larger stone in the distal common bile duct. I suspect that this is causing a partial obstruction, but a complete obstruction is also possible. Correlate these findings with blood work results. If a biliary obstruction is consistent with current lab findings then options moving forward include medical management with antibiotics, Ursodiol, pain medication, anti-nausea medication, etc. or consultation with a veterinary surgeon about possible biliary rerouting, stone removal, stent placement, etc. Close monitoring for possible bile peritonitis will need to be maintained.

Additionally the prostate appears mineralized and abnormal. The size of the prostate can be normal if the patient was neutered after puberty. Options moving forward include urinalysis, culture and continued monitoring versus a FNA of the prostate +/- urine BRAF test (keep in mind a negative BRAF test does not rule out cancer).

I recommend three view thoracic radiographs to evaluate the esophagus due to the history of regurgitation and to look for evidence of intrathoracic disease.

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Spleen
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LA
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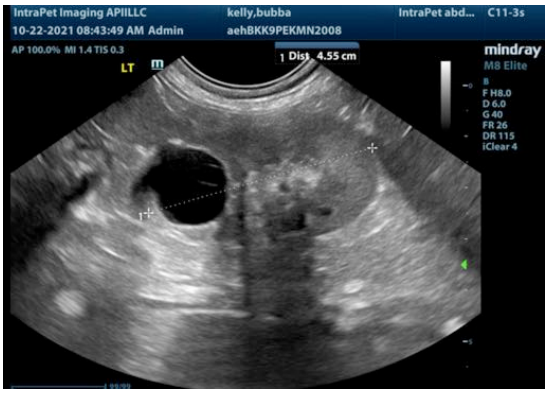
3 Dist 0.63 cm
mindray
M8 Elite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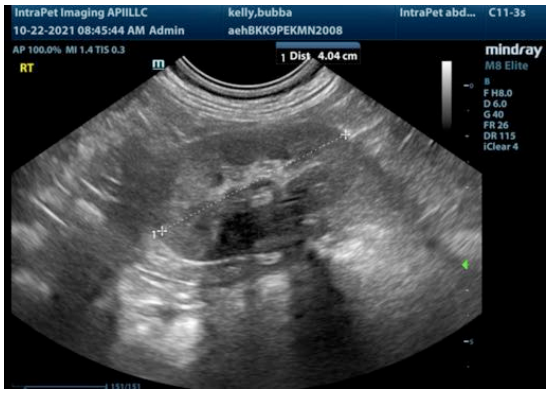
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RT
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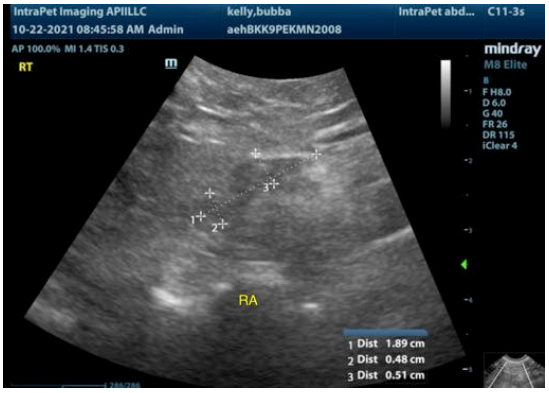
mindray
M8 Elite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RT
RA
1 Dist 1.89 cm
2 Dist 0.48 cm
3 Dist 0.51 cm
mindray
M8 Elite


IntraPet Imaging APIIILLC
kelly,bubba
IntraPet abd...
C11-3s
10-22-2021 08:44:52 AM Admin
aehBKK9PEKMN2008
AP 100.0% MI 1.4 TIS 0.3
Prostate
mindray
M8 Elite

The information and recommendations provided are based on the images presented by the referring veterinarian. 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