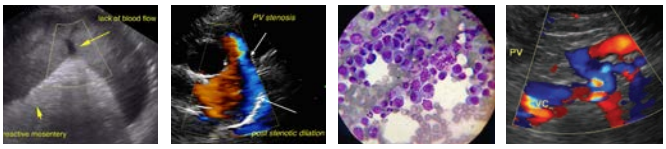
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Kimahri Heigho

SPECIES
Canine

BREED
Pomeranian

SEX
Neutered Male

AGE
10 Years

WEIGHT
7.6 Pounds

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

IMAGING PERFORMED BY
Dr. Carter

HOSPITAL NAME
Willamette VH

REFERRING VET
Dr. Nelson

INVOICE
26126

DATE
10/6/21

PRESENTING CLINICAL SIGNS

Presented for exam on 9-8-21 with history and concerns: O concerned that pt has been straining to UR, infrequently. Hx of incontinence. Difficult breathing due to collapsed trachea, seen by AB in July. O expressed that pt has not been doing well with the heat. Tongue has seemed dark blue/purple. Pt has been coughing frequently. Wheezing/ whooping dry cough, no pattern. After coughing, pt will gag. Rattling breathing that O described as a mucousy sound in lungs. O explained that pt may be painful. O may brush against hind leg, pt cries out. Weak RH leg. Hx of patella luxation. Broken RF leg when pt was a puppy, O understand that this can cause some arthritis. Difficulty walking within the last 6 months, has been worsening. Slips on floors. Hx of CHF. Pt R side of anus swollen, suspect anal glands need expressed. Hx of L side of AG rupturing. E/d/bm wnl. Some sneezing noted occasionally when air quality was poor, has since improved On exam; bilateral MLP. On temaril P for coughing. Plan to wean off and consider nsaid's for arthritits.
Abnormal PE/Chem/CBC/UA Results: ALT 335, ALP 278, GGT 16 T4 <0.5 elevated platelets; 418,103 urine pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is mildly 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, or masses. There are at least two mineral densities in the dependent portion of the urinary bladder. One measures 0.45 cm. Another measures 0.37 cm. These are consistent with at least two cysti calculi.

The prostate is normal in size 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 (3.18 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Non-obstructive nephroliths noted and pyelectasia at 0.22 cm. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (2.81 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Non-obstructive nephroliths are present. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

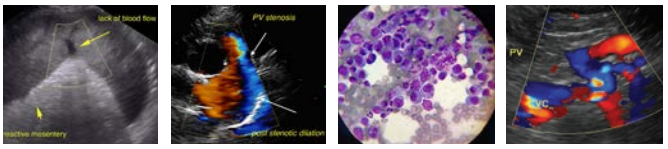
Adrenal Glands

The left adrenal gland is normal in size measuring 0.28 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 0.47 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.



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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. 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. 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.

Other

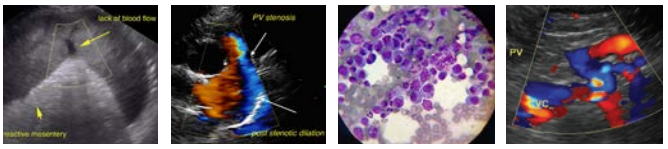
There is questionable scant pleural effusion observed cranial to the diaphragm.

PRIMARY FINDINGS

- Cystic calculi – at least two discreet bladder stones are visualized. Recommend abdominal radiographs to further evaluate size and number and to look for any urethral stones.
- 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

- Small non-obstructive nephroliths in both kidneys and mild left-sided pyelectasia – The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney



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are consistent with small, non-obstructive nephroliths. Pyelectasia of the left kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

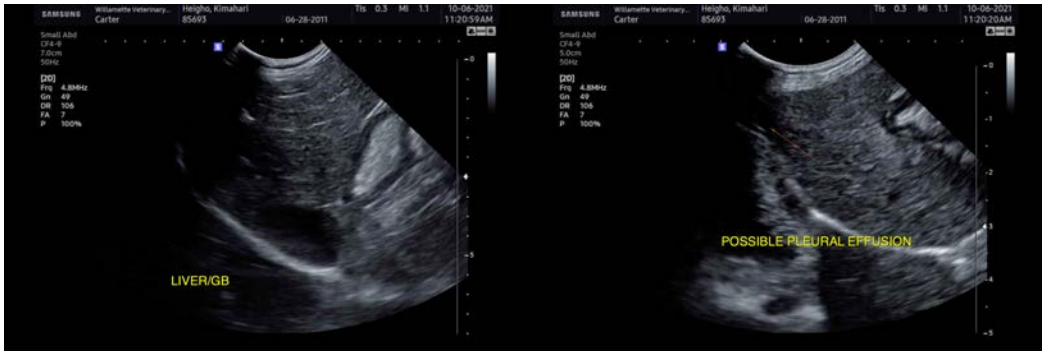
- Mild gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Questionable pleural effusion – recommend thoracic radiographs.

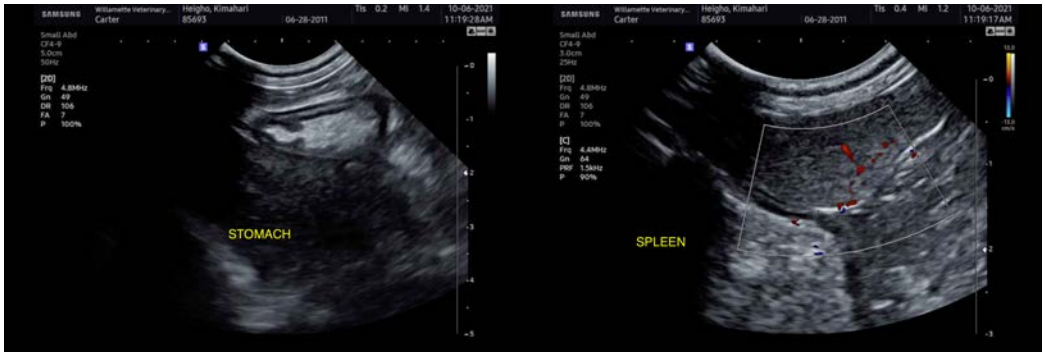
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver changes observed are relatively mild and non-specific. You could consider a liver function test to further evaluate. If liver function is abnormal, then I would consider a fine needle aspirate or even a liver biopsy. Recommend starting Denamarin or other hepatoprotectant medication.

The urine straining observed is likely due to the stones visualized and possible cystitis. Recommend urinalysis and culture and radiographs to further evaluate the size and number of stones present. Cystotomy may be recommended. If cystotomy is performed, consider obtaining a liver biopsy at that time.

Prior to considering any type of anesthesia, consider 3-view thoracic radiographs to further evaluate the respiratory issues described +/- echocardiogram to look for pulmonary hypertension, etc.





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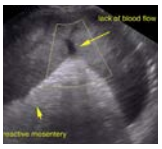
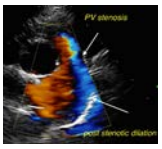
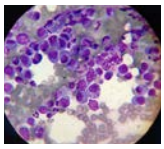
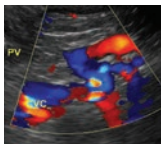

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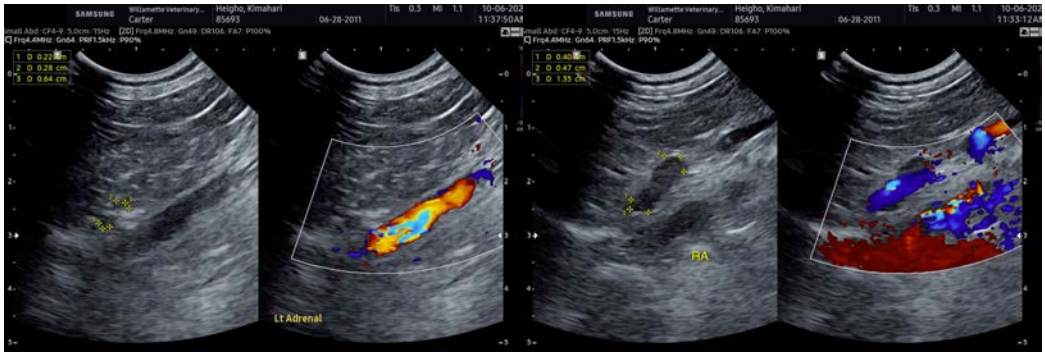

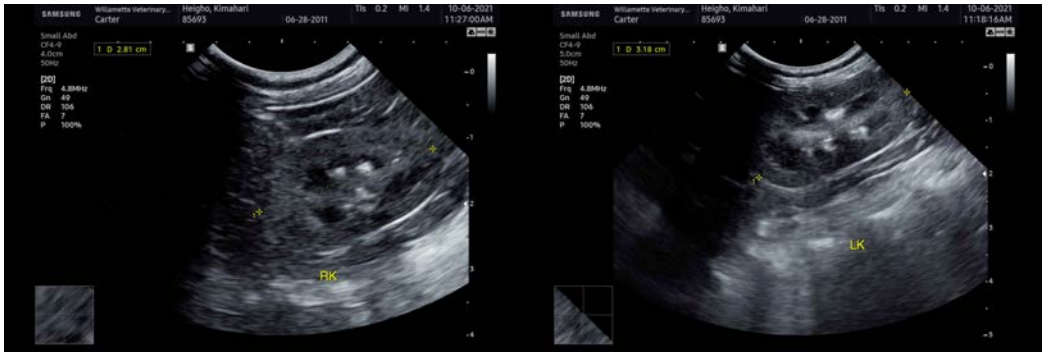

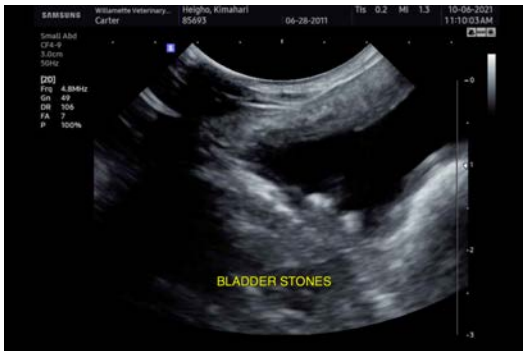

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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