



PATIENT PRESENTING CLINICAL SIGNS

Ruby Young

8 yo MN Shih tzu mix. History of MVR and LA enlargement on pimobendan (2.5mg PO Q12). Owner has noticed increase in coughing. Acute on chronic history of vomiting, on hydrolyzed protein diet.
ECHOCARDIOGRAM 1/21/22: BW 12.7 kg BSA 0.535 IVSd: 8 mm LVIDd: 31 mm LVPWd: 8 mm EPSS 2 mm IVSs: 14 mm LVIDs: 16 mm LVPWs: 15 mm %FS: 48 % Pa: 12 mm Ao: 16 mm LAD: 26 mm LA:Ao ratio 1.63 LA max: 28 mm LLAD: 26 mm RWT = IVSd+LVPWd/LVIDd = 0.52, LVID long 41 cm, Sphericity index 1.32 (Lax/Sax, <1.65=increased sphericity). Norm LA:Ao < 1.7, Normal LLAD < 28.50 mm, LVIDdn=1.47 (N<1.73), LVIDsn=0.72 (N<1.4) Ao 18 mm Pa peak flow velocity - 0.8 m/s, gradient 2.6 mmHg, Ao pfv 1.4 m/s, gradient 7.8 mmHg MV E vel: , MV Dec T: , MV A vel: , IVRT: ms, E:A (N 1-2)E:IVRT (N<2.5) Ea E:Ea (N<14.5) Pa distensibility (mm): 8.1 - 4.5 = 44 %PEP/ET = 34/147 = 0.23, > 0.4 is abnormal, with myocardial failure, Tricuspid peak flow velocity - 2.8 m/s, gradient 31.4 mmHg, acceleration time 67 ms, PAET 139 ms ratio = 0.48 (ratio greater than 0.30 is considered normal) 100% spec for PH if AT < 45 ms +/- or AT:ET < 0.25, 100% spec for Normal if AT > 64 ms +/- or AT:ET > 0.42 Grey zone for predicting: AT < 58 ms (Se 88%, Sp 80%), AT:ET < 0.31 (Se 73% and Sp 87%)
Comments: Good systolic function but mild left atrial and left ventricular enlargement is present. Hyperdynamic left ventricle motion. The mitral valve was thickened and prolapsing with evidence of moderate mitral regurgitation. Trivial tricuspid regurgitation was present. No evidence for pericardial or pleural effusion.

SPECIES

Canine

BREED

Mix

SEX

Neutered male

AGE

8 years

WEIGHT

19.1 lbs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 2.9 cm.

IMAGING PERFORMED BY

Dr. Petrone

Adrenal Glands

HOSPITAL NAME

Long Branch AH

The **adrenal glands** were not visualized.

REFERRING VET

Dr. Petrone

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

INVOICE

30283

DATE

5/11/22



PATIENT

Ruby Young

Liver

SPECIES

Canine

BREED

Mix

SEX

Neutered male

AGE

8 years

WEIGHT

19.1 lbs

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Increased portal markings were noted in the liver. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder was over distended, rounded with inspissated bile. This is consistent with mucocele formation. Inflammation was noted around the gallbladder. Minor areas of free fluid were noted around the gallbladder. The cystic duct was also dilated with inspissated bile.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Retention of ingesta was noted in the stomach. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

ULTRASONOGRAPHIC FINDINGS

Inflamed gallbladder mucocele.

IMAGING PERFORMED BY

Dr. Petrone

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This is a surgical emergency. Cholecystectomy is recommended.

HOSPITAL NAME

Long Branch AH

REFERRING VET

Dr. Petrone

INVOICE

30283

DATE

5/11/22



PATIENT

Ruby Young

SPECIES

Canine

BREED

Mix

SEX

Neutered male

AGE

8 years

WEIGHT

19.1 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

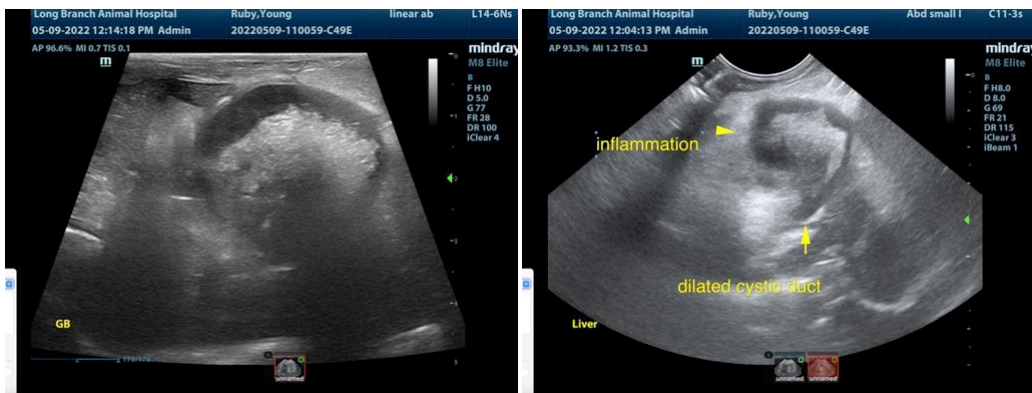
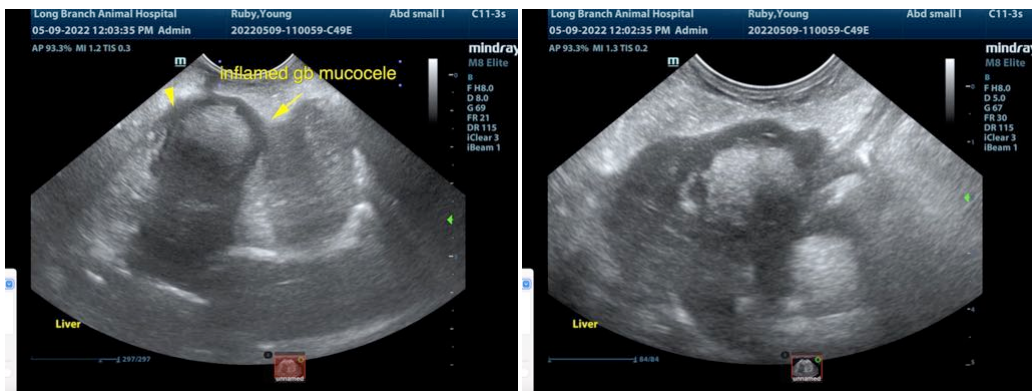
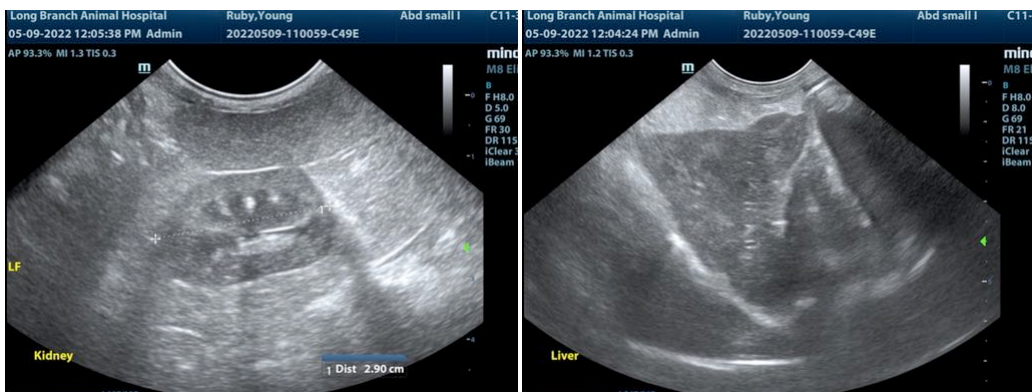
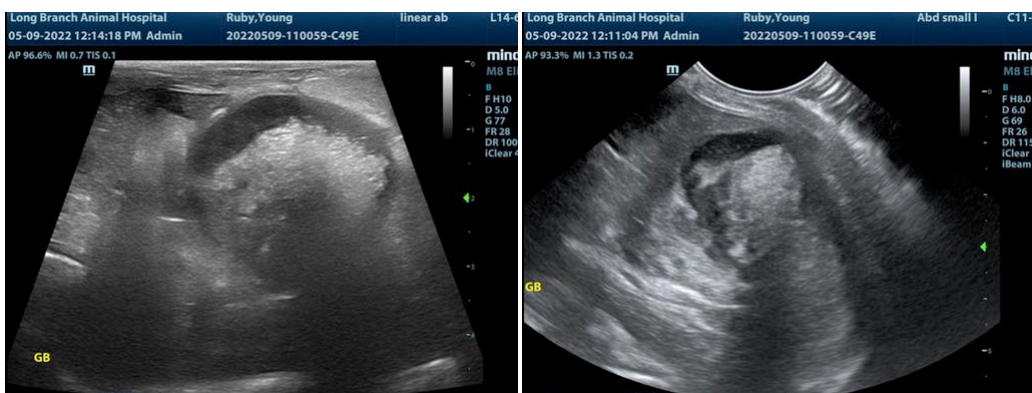
Dr. Petrone

INVOICE

30283

DATE

5/11/22





PATIENT

Ruby Young

SPECIES

Canine

BREED

Mix

SEX

Neutered male

AGE

8 years

WEIGHT

19.1 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Dr. Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

Dr. Petrone

INVOICE

30283

DATE

5/11/22

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com