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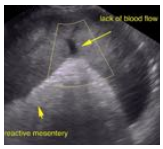
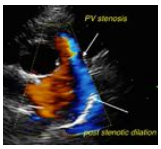
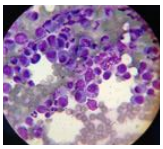
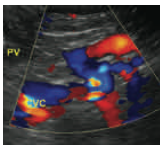

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1-800-838-4268 info@sonopath.com

PATIENT
Chloe Lemkan

SPECIES
Canine

BREED
Maltese

SEX
Spayed Female

AGE
12 years

WEIGHT
10.7 lbs

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Kelly Vazquez , CVT

HOSPITAL NAME
Midland Park

REFERRING VET
Dr. Shokoff

INVOICE
91526

DATE
8/26/21

PRESENTING CLINICAL SIGNS

History: Suspect Cushingoid, elevated liver values, proteinuria, hypertension (systolic >180mmHg) - grade 2/6 heart murmur. Current meds: Thyroxine 0.1 mgs BID, Amlodipine 1.25 mgs BID, Enalapril 2.5 mgs BID.
Abnormal PE/Chem/CBC/UA Results: ALT 212, ALP 444, BUN 44, creat. normal 0.6, platelets 585. U/A: pH 6.5, 2+ protein, USG 1.023.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The **echocardiogram** presented a prominent **right heart** with mild **right ventricular** hypertrophy, without significant **tricuspid** regurgitation, and normal **right atrial** size. No evidence of neoplasia was noted in the right auricle, or elsewhere in the heart. The **pulmonary artery** was uniformly prominent with mildly depressed pulmonic velocity measured on PW Doppler. No overt heartworms were noted in the main or visible deep pulmonary arteries. Yet, theoretically heartworms could be present in the deep pulmonary vasculature out of visible sonographic range. More likely, however, this prominent right heart is due to excessive intra-thoracic pressures caused by chronic respiratory disease or potentially excessive intra-thoracic fat (Pickiwickian syndrome). The **left heart** demonstrated a linear **ventricular septum**. Contractility was functionally adequate demonstrated by the FS% measurement. The **mitral valve** was not significantly insufficient and no significant **left atrial** dilation was noted. The **left ventricular outflow** demonstrated normal flow patterns and velocities through the aortic valve. No evidence of tumor, pericardial or pleural effusion was noted. The visible **extra-cardiac** tissues were uniformly linear without evidence of masses, infiltrative or inflammatory mediastinal tissue. No evident arrhythmic activity was noted during the exam.

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.0	54	87	NM
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT**	**LA** 2D short axis Base view (cm)	**LVIDd** Avg; 2D and m-mode short axis (cm)	**LVIDs** Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	136	1.57		10.7 lbs	2.07	2.03	

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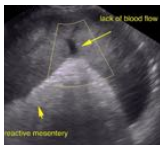
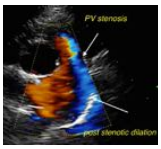
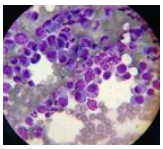
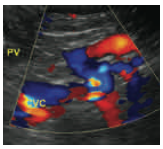

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ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. The urinary bladder revealed a 0.53 cm, non-obstructive shadowing calculus. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

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 kidneys measured 3.5 cm each.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.44 x 0.6 cm at the caudal pole and 0.43 cm at the cranial pole. The left adrenal measured 1.61 x 0.54 cm at the caudal pole and 0.5 cm at the cranial pole.

Spleen

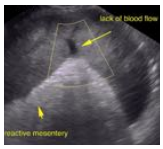
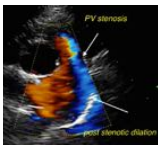
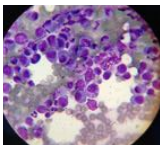
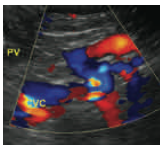
The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or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

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

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. Small and large intestine

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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.

ULTRASONOGRAPHIC FINDINGS

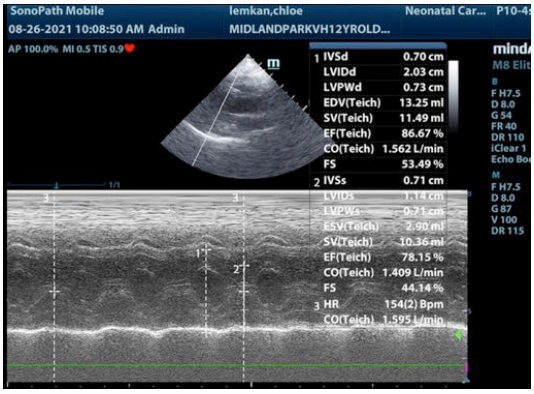
Minor right cardiac enlargement, non-functional conformational issue or possible secondary to chronic respiratory disease depending upon radiographic findings.

Bladder calculus.

Moderate chronic hepatic changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Cystostomy, stone analysis and culture would be warranted. Assessment for urinary tract infection is indicated. The cause of hypertension is unclear. Structurally the adrenal glands appear normal. However, if urine specific gravity remains subnormal, a small percentage of PDH patient's can have normal adrenal glands.



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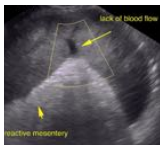
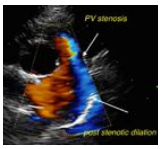
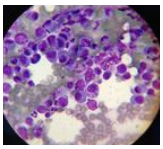
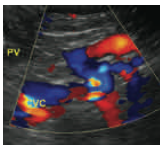

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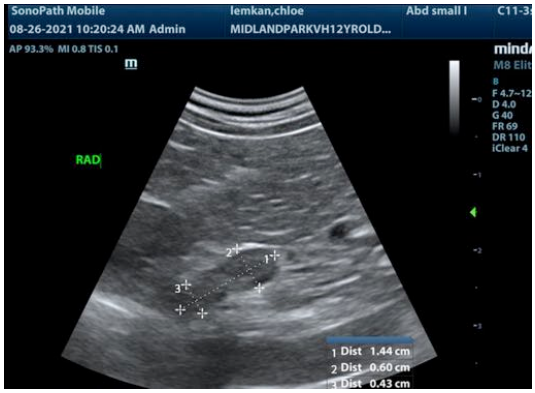

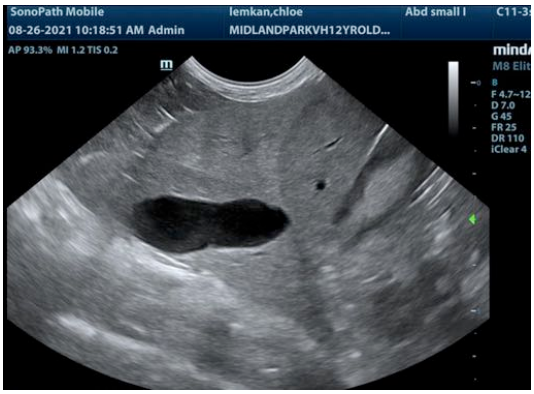

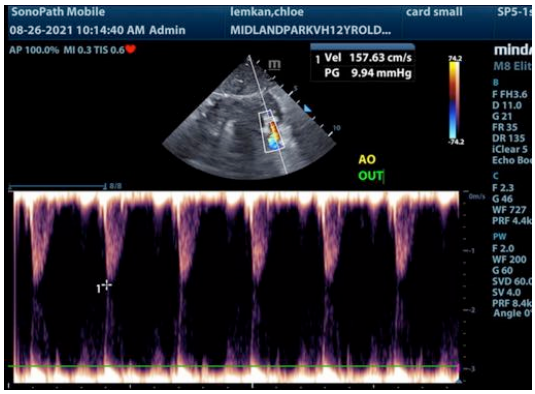

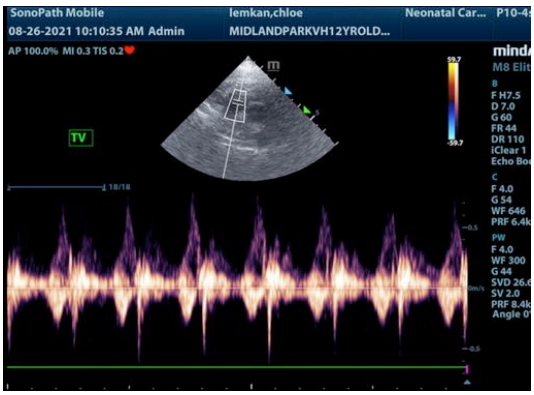

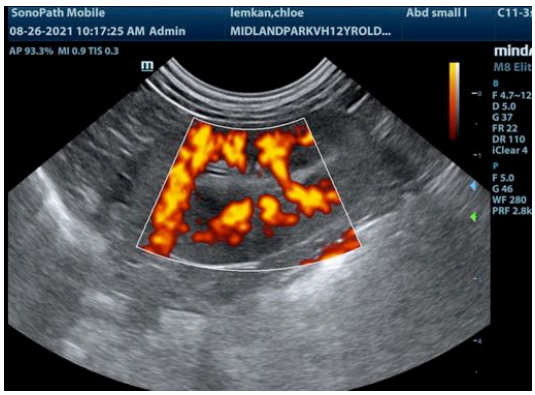

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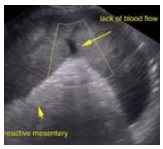

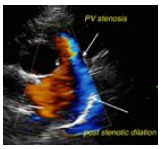

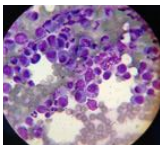
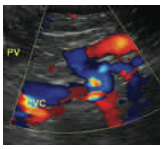

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veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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