
PATIENT PRESENTING CLINICAL SIGNS

Iris Amis Has heart murmur and has been quite sick lately. Was adopted from Dominican Republic. Has been on Doxycycline(2nd round) and just finished Buprenorphine ear gel for pain. Has been lethargic, limping hind legs on and off and very little appetite. Was admitted last week for IVF for the day. Has also been on Metronidazole. Stomach feels hard and bloated.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: Positive for Ehrlichia.

BREED ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Yorkie

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. **Mitral** valve insufficiency was noted in this patient, yet is not clinically significant and is centralized. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** insufficiency was noted and measured 1.92 m/sec. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

SEX

Spayed female

AGE

1 ½ years

WEIGHT

7.2 lbs

INTERPRETED BY

 Eric Lindquist, DMV
 DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Crystal Hill, RVT

HOSPITAL NAME

Beamsville AH

REFERRING VET

Dr. Hagar/Song

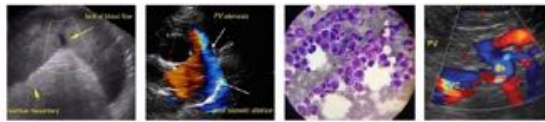
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DATE

7/15/22

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		1.92	NM	1.0	40	74	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	BELOW	BELOW	BELOW	BELOW
PATIENT	116		0.8	7.2 lbs	2.02 mbax	2.09	0.54



PATIENT **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Iris Amis

Urinary System

SPECIES

Canine

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.

BREED

Yorkie

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.72 cm. The left kidney measured 3.01 cm.

SEX

Spayed female

Adrenal Glands

AGE

1 ½ years

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 0.49 cm. The left adrenal gland measured 0.5 cm.

WEIGHT

7.2 lbs

Spleen

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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.

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Liver

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The **liver** images submitted revealed subjectively normal liver size, contour, and structure. 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 presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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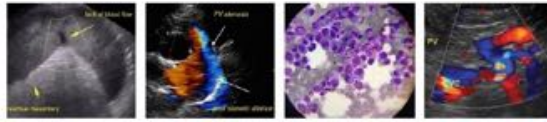
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Gastrointestinal

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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 demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.



PATIENT *Pancreas*

Iris Amis 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.

SPECIES

Canine

ULTRASONOGRAPHIC FINDINGS

BREED

Stage B1 valvular disease with arrhythmia.

Yorkie

Trivial mitral and tricuspid insufficiency.

Concern for myocarditis.

SEX

Normal abdomen, no evidence of pathology.

Spayed female

AGE

1 ½ years

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the patient's history underlying endocarditis may have been an issue; however, the mitral and tricuspid insufficiency changes were minor and non-clinical. Occasional arrhythmia was noted in this patient. EKG or Holter monitor is indicated to assess if treatment is necessary. This may be contributing to the clinical signs. Given the patient's history underlying causes of myocarditis should be investigated based on the travel region.

WEIGHT

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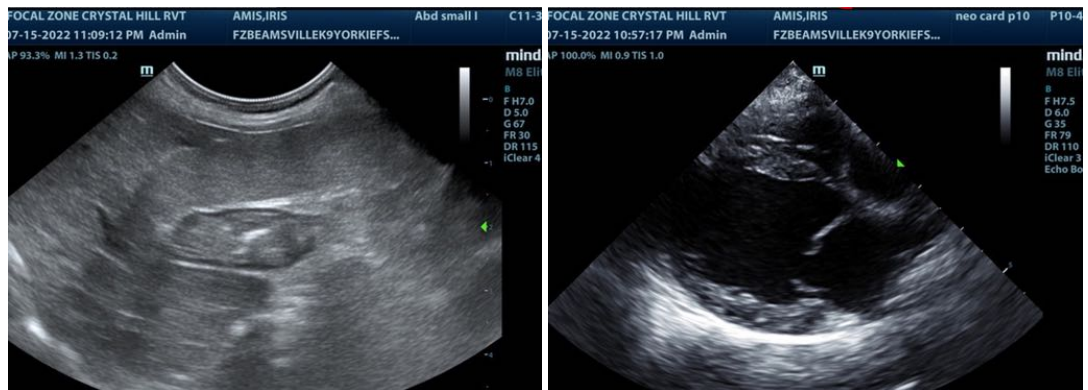
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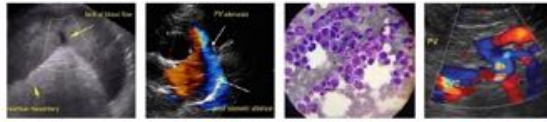
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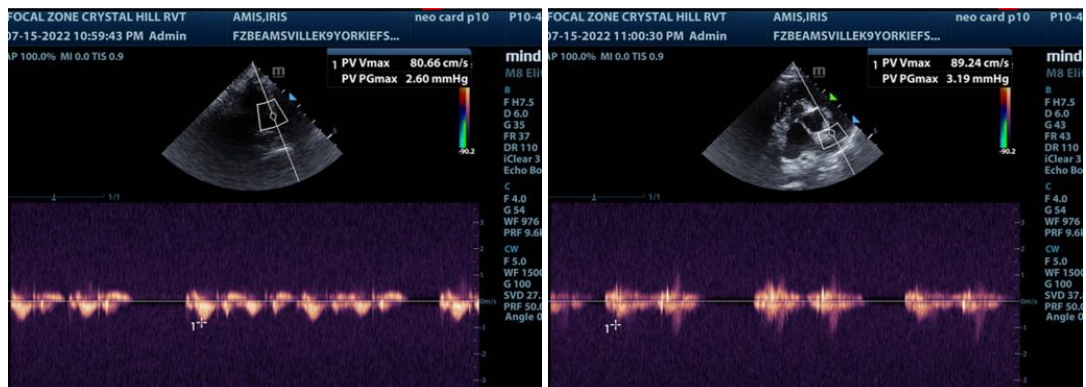
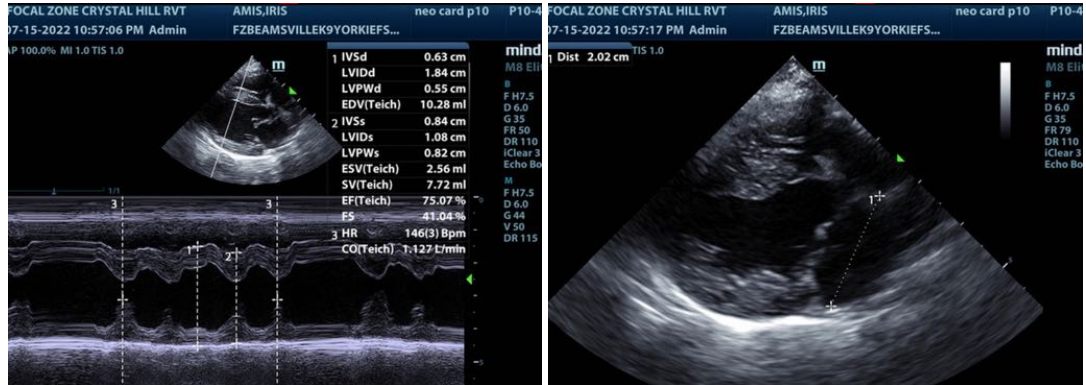
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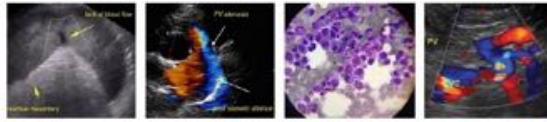
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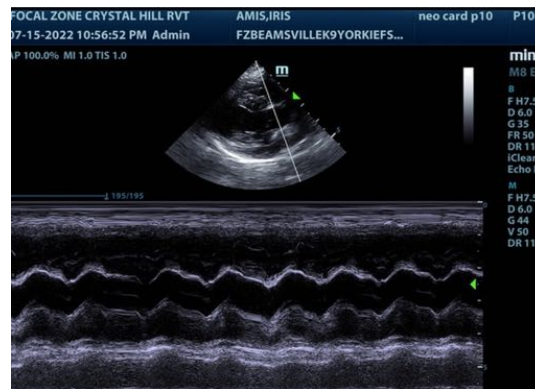
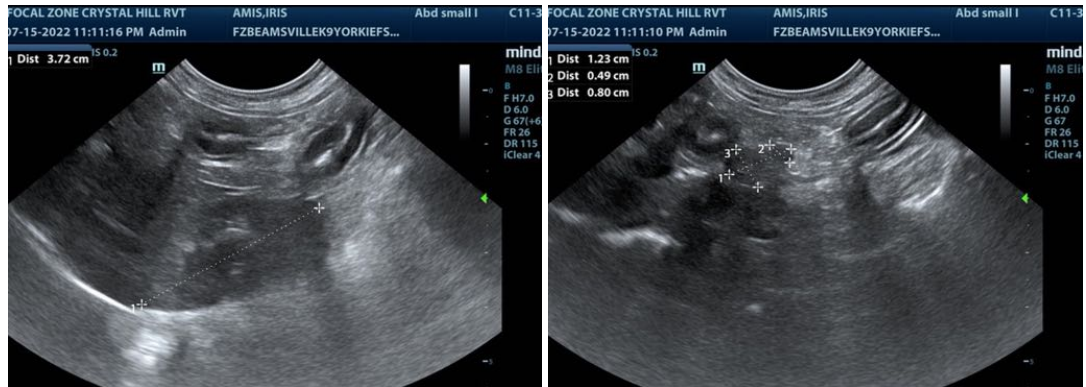
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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