



PATIENT

Max Vargas

SPECIES

Canine

BREED

Poodle

SEX

MN

AGE

10 years

WEIGHT

18 lbs.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Ridge Road AH

REFERRING VET

Dr. Pathak

INVOICE

13218

DATE

2/1/22

PRESENTING CLINICAL SIGNS

Difficulty breathing/coughing over the last few weeks, grade III-IV/VI L heart base murmur/muffled cardiac sounds bilaterally. Pleural effusion, thoracocentesis performed 3 days ago and today (630mls serosanguineous fluid removed) Current meds: Furosemide 25mg q24h, Baytril 1.25mg q12h, Clavamox 125mg q12h
Abnormal PE/Chem/CBC/UA Results: Mild neutrophilia, leukocytosis.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	5.0	2.4	1.22	1.31	39.2	72.2	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	155	1.0	0.8		3.0	2.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric insufficiency. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. Mild TR was present on color doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Moderate to severe volume pleural free fluid exhibiting mild subjective cellular component was present. No evidence of concurrent pericardial free fluid was noted. No overt evidence of cardiac, pericardial, or cranial mediastinal masses, as well as no overt evidence of thoracopulmonary masses in the visible window, was noted. Subjective brief



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evaluation of the cranial abdomen and liver revealed subjective evidence of minor cranial abdominal caudal vena cava and hepatic vasculature congestion, yet no overt evidence of cranial abdominal ascites.

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ULTRASONOGRAPHIC FINDINGS

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- Compensated chronic mitral valve disease
- Mild TR - estimated pulmonary pressure gradient (Approximately 22 mm Hg) not consistent with overt clinical pulmonary hypertension
- Subjective mild cranial abdominal caudal vena cava and hepatic congestion, no overt ascites

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The overall lack of left or right heart chamber enlargement, systolic dysfunction, or evidence of overt clinical pulmonary hypertension indicates that the pleural effusion in this patient is most likely noncardiogenic in origin. Likewise, the lack of right atrium or right ventricle enlargement, as well as no overt clinical pulmonary hypertension was not overtly suggestive of elevated pulmonary pressure as a potential cause of emerging caudal vena cava and hepatic congestion.

No indication for cardiac medications was evident. Thoracocentesis for effusion analysis, cytology +/- C/S If evidence of inflammatory cells is recommended for further clarification. Abdominal ultrasound is recommended to assess for potential primary or concurrent abdominal pathology as a primary or potential contributing factor to the development of noncardiogenic pleural effusion. If possible, thoracic CT is likely ideal in this case for further assessment pending pleural effusion analysis.

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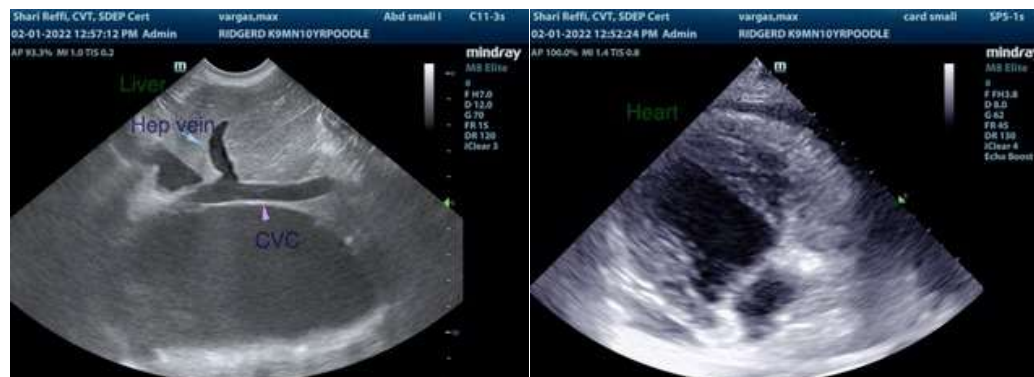
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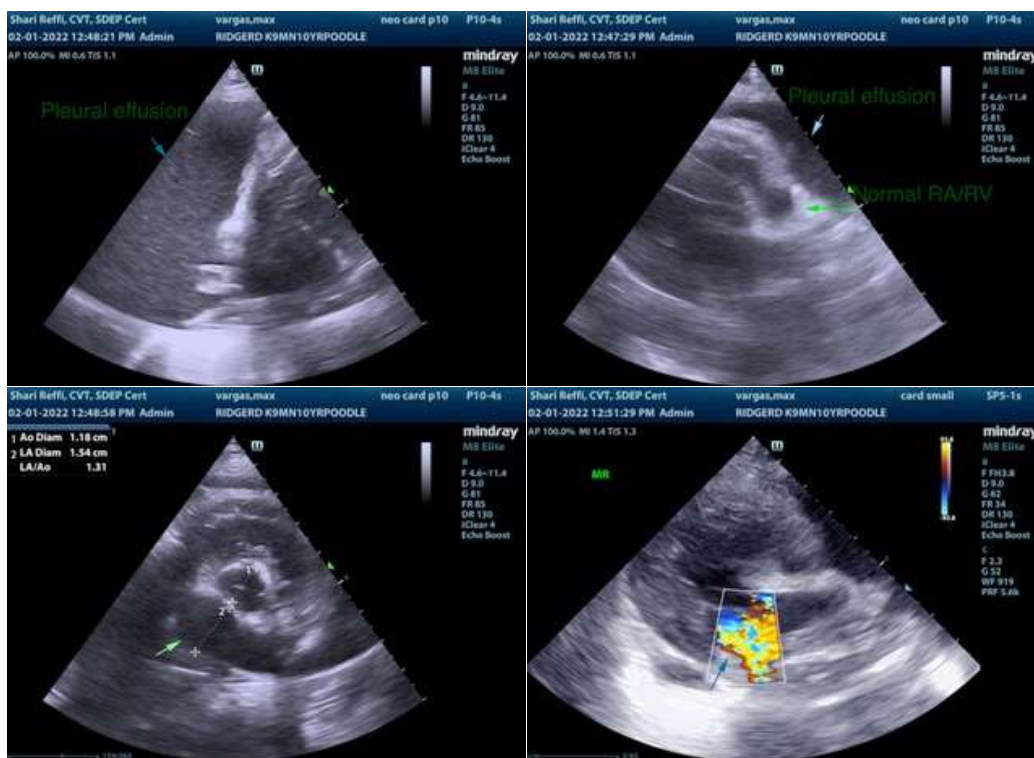
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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info@SonoPath.com

SonoPath CT Services are offered at the Blairstown Animal Hospital. Blairstown, New Jersey. More information can be found at <https://sonopath.com/resources/sonopath-teleconsultation-services-and-sdep-certification/sonopath-ct-services>