



PATIENT PRESENTING CLINICAL SIGNS

Nugget Campo Newly auscultated grade III/VI murmur. Worsening cough. No current meds.
Abnormal PE/Chem/CBC/UA Results: Na 159, CL 121, Tri 350,

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

11 Years

WEIGHT

6.4 Pounds

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	5.5	<1.0	NM	1.5	56.8	88.9	0.18
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				
PATIENT	124	1.0	0.8		2.3	2.2	

Cardiac Presentation

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

AH of Roxbury

REFERRING VET

Dr. Elia

The echocardiogram for this patient presented mildly excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric mitral valve 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. 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). No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B2)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

DATE

9/23/21

The lack of significant left atrial enlargement indicates that the risk of current or future complication is relatively low. However, prognosis is highly variable at this stage. The coughing in this patient is suspected to be multifactorial in origin, yet without clinical issues such as systolic dysfunction or clinical



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pulmonary hypertension, a non-cardiogenic cough is considered likely. Given the lack of left heart chamber enlargement, no overt indication for cardiac medications. Lower airway therapy +/- hydrocodone trial could be considered. Heartworm test (if not recently done) may be considered. Recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease i.e., exercise intolerance, increased resting respiration rate, etc. are noted. 3-view chest radiographs suggested if not done to assess for evidence of primary pulmonary disease.



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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