SonoPath

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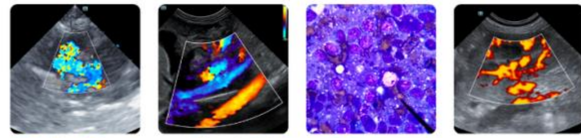


Clinical Sonography & Telecytology

Educational Teleconsultation Services™

PATIENT

Rocky Lucas

SPECIES

Canine

BREED

Chihuahua/Poodle Mix

SEX

Male

AGE

10

WEIGHT

11

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

IMAGING PERFORMED BY

Dr. Sharkaway

HOSPITAL NAME

Kew Gardens Animal Hospital

REFERRING VET

Dr. Nader

INVOICE

15364

DATE

04/22/26

PRESENTING CLINICAL SIGNS

Severe chronic mitral valve disease with left heart volume overload and mild valvular prolapse (ACVIM stage C).

Abnormal PE/Chem/CBC/UA Results: Heart murmur grade 5/6

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

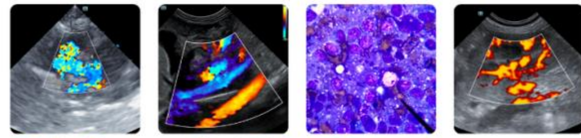
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	NM	2.7	40	74	0.42
CANINE CARDIAC PARAMETERS	**HR (BPM)**	**AV VMAX (m/s)**	**PV MAX (m/s)**	**BODY WEIGHT**	**LAD** LA MAX 4 Chamber	**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	NM	--	1.0	11	4.6	4.2	--

Cardiac Presentation

The echocardiogram in this patient demonstrated severe increased **left atrial** size based on 2 different LA measurement methods with intra-atrial septal deviation. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis with valvular prolapse and abnormal valvular coaptation. Doppler indicated measurable eccentric MR. The **left ventricle** presented severely increased dimension and sphericity. 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 mild thickening with mild valvular prolapse. 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 cardiac / pericardial tumors was visible. No evidence of arrhythmia.

Brief hepatic assessment revealed no overt hepatic congestion with focal transdiaphragmatic comet tail artifact.

ULTRASONOGRAPHIC FINDINGS



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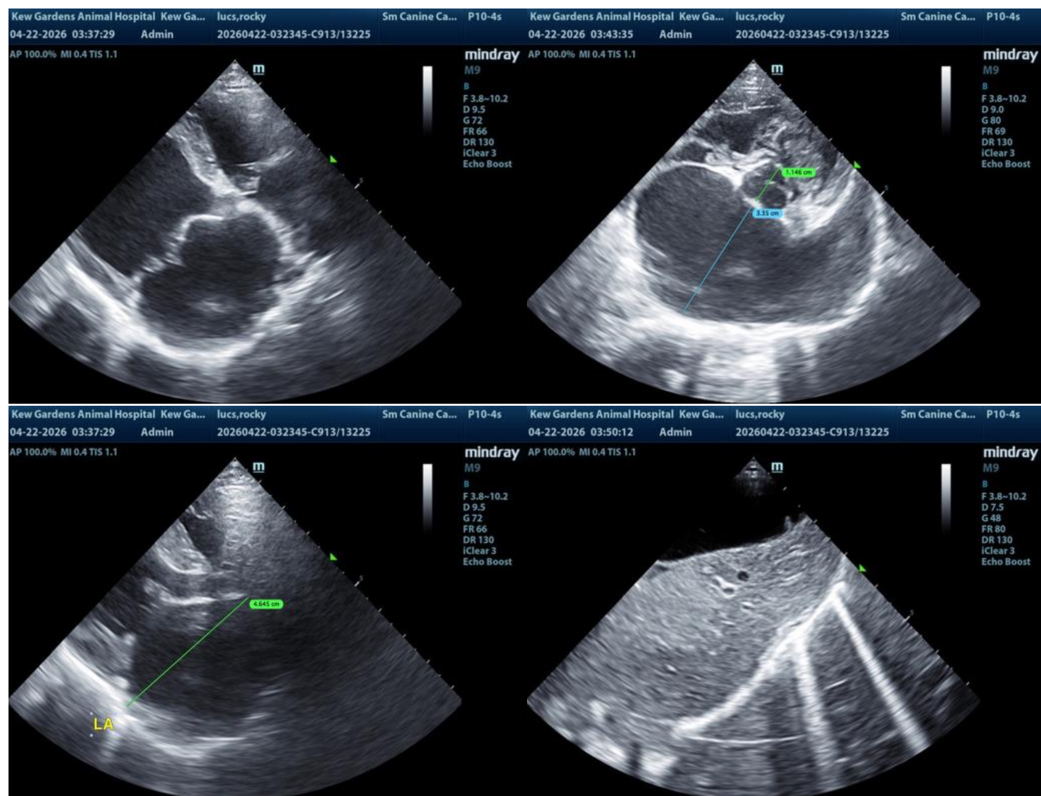
- Severe mildly progressive chronic mitral valve disease with left heart volume overload, mitral valve prolapse and abnormal coaptation (ACVIM stage C).
- Thickened tricuspid valve with mild valvular prolapse.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

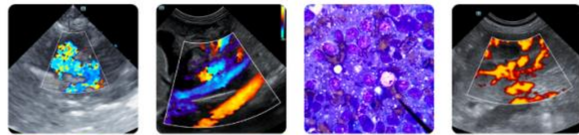
Progression of LA enlargement compared to the previous study based on LA/AO heart base and LA 2D max measurement is present. Continued triple therapy including Vetmedin, furosemide/spironolactone combination and if clinical signs are consistent with pulmonary hypertension, lowest effective dose of sildenafil is recommended. If persistent signs of left-sided congestion, TID dosing of furosemide may be indicated.

Prognosis remains severely guarded going forward as this patient will continue to remain at increased risk for progressive CHF or pulmonary hypertension, development of malignant arrhythmia or sudden death. Exercise restriction is advised. Monitoring of systemic BP, renal parameters and ECG would be ideal. Sonographic monitoring is recommended with recheck echo suggested in four to six months, sooner if progressive clinical signs.



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



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can be of any further assistance, please contact me.

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