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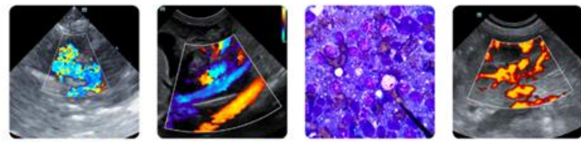

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com info@sonopath.com 1.800.838.4268

PATIENT
Potato Shiu

SPECIES
Canine

BREED
Pomeranian

SEX
MN

AGE
12

WEIGHT
17.6

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

IMAGING PERFORMED BY
Dr Sharkawy

HOSPITAL NAME
Kew Gardens Animal Hospital

REFERRING VET
Dr Nader

INVOICE
23094

DATE
12/03/2025

PRESENTING CLINICAL SIGNS

Severe Dental calculus

Abnormal PE/Chem/CBC/UA Results: Heart murmur 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	--	--	--	2.0	48	82	0.45
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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	--	1.0	0.6	--	3.1	3.2	--

Cardiac Presentation

The echocardiogram in this patient demonstrated moderate to significant increased left atrial size based on 2 different LA measurement methods. Mild deviation of the interatrial septum was noted. The cranial and caudal mitral valve leaflets presented thickening consistent with endocardiosis. Mild valve prolapse was present. Doppler indicated eccentric insufficiency. The left ventricle presented normal wall thickness with moderate to significant increased LV 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 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 cardiac / pericardial tumors was visible. Brief hepatic assessment revealed no evidence of hepatic congestion. No evidence of arrhythmia

ULTRASONOGRAPHIC FINDINGS

Primary

- Chronic mitral valve disease with mild mitral valve prolapse (ACVIM B2-B2+)

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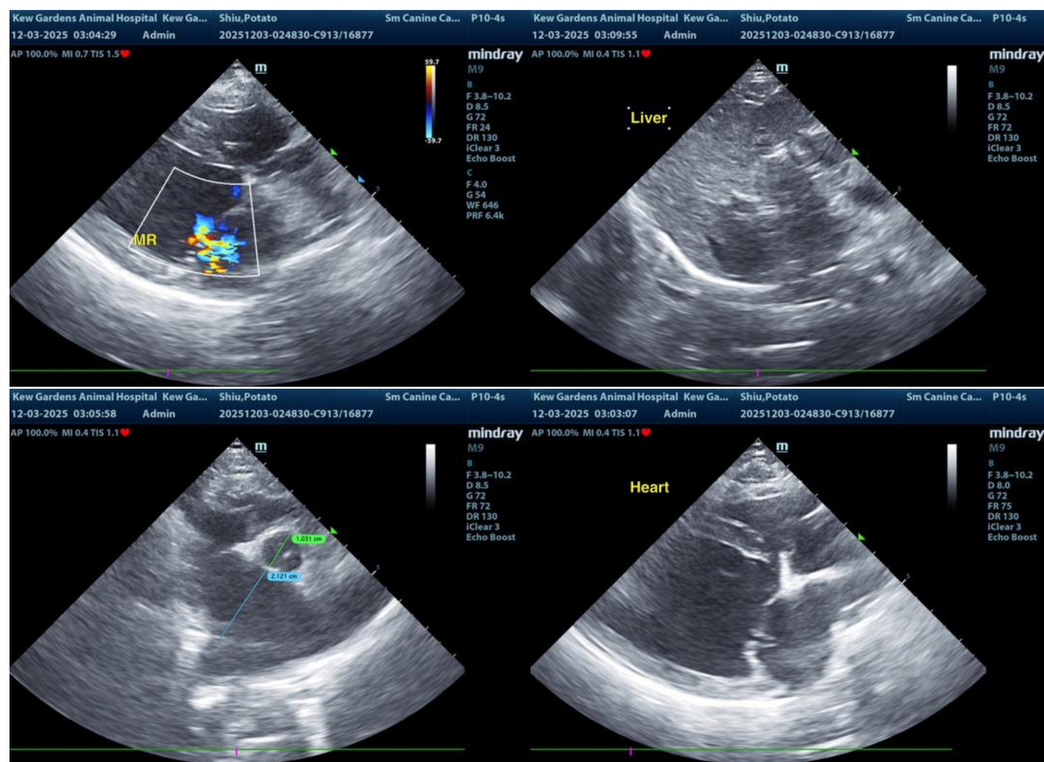
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The degree of LA /LV enlargement and left heart volume overload indicate the current and future risk of complications secondary to MR is moderate to significantly elevated. No other clinical issues such as LV systolic dysfunction, arrhythmia or evidence of clinical pulmonary hypertension. Pimobendan 0.3 mg/kg BID, weak diuretic spironolactone 1-2 mg/kg BID, if no current evidence of congestion +/- Lasix /spironolactone combination, both 1-2 mg/kg PO BID if evidence of left sided congestion and ACE inhibitor, 0.5 mg/kg SID possibly titrating to BID is warranted.

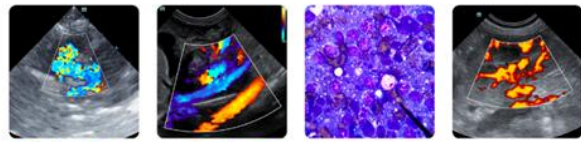
Monitoring off resting RR going forward is advised. Current anesthetic risk is moderate to significantly elevated. Ideally, 3-5 days of consistent Pimobendan prior to consideration for anesthesia is recommended. If anesthesia is elected, the following protocol is recommended with limited anesthetic time and injudicious IV fluid use with close clinical monitoring. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists. Recheck echo is recommended in six months, sooner if clinically indicated.



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.

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



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