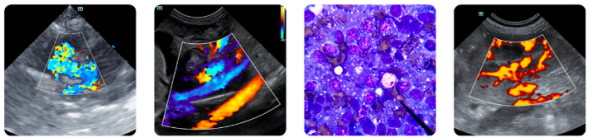


PATIENT

Tokyo Rivera

SPECIES

Canine

BREED

Chihuahua

SEX

Male Neutered

AGE

18

WEIGHT

17.7

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Sharkaway

HOSPITAL NAME

Union Vet AH

REFERRING VET

Dr. Sharkaway

INVOICE

12947

DATE

12/12/25

PRESENTING CLINICAL SIGNS

History: Hyperadrenocorticism Hypothyroidism Tricuspid valve regurgitation Mitral valve regurgitation Overweight Chronic dental disease Coughing Collapsed 1 month ago

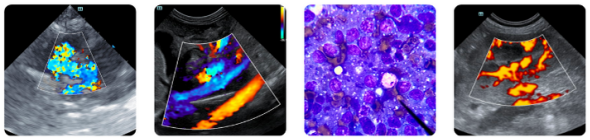
Abnormal PE/Chem/CBC/UA Results: Heart murmur grade 4/6 Epoc- Mild elevated potassium

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	--	--	--	1.35	45	82	0.2
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	NM	--	1.1	--	2.7	2.3	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented thickening (anterior greater than posterior) consistent with endocardiosis and valvular prolapse. Doppler indicated moderate 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 mild increased size comparable to the left atrium and with normal structure and content. Right atrial dimension measured 2.7 cm. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated thickening with valvular prolapse. Color or pulse wave doppler assessment of the tricuspid valve was utilized. 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). Normal measured RVOT velocity was noted. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of cardiac / pericardial tumors was visible.



SonoPath.com info@sonopath.com 1.800.838.4268

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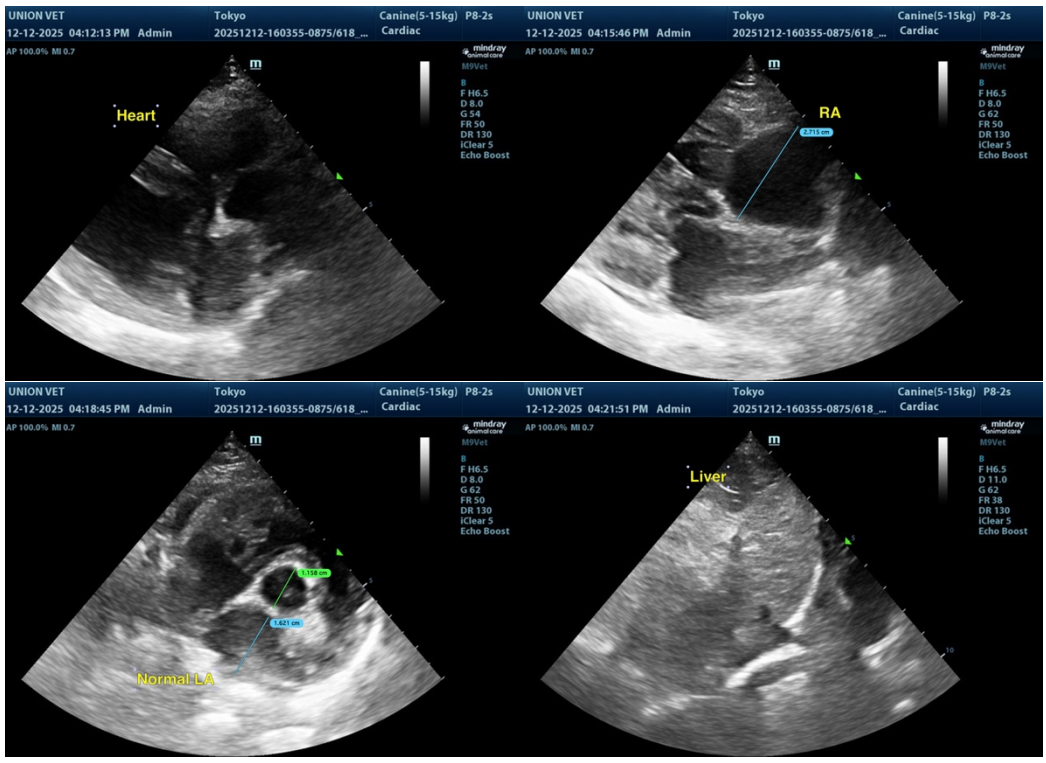
ULTRASONOGRAPHIC FINDINGS

- Compensated mitral valve disease with mitral valve prolapse (B1)
- Thickened tricuspid valve with valve prolapse
- Mild increased RA dimension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of LA enlargement continues to indicate the current and future risk of complications secondary to MR is low without evidence of left heart volume overload as a contributing factor to the patient's respiratory signs. The possibility of mild pulmonary hypertension cannot be excluded yet the right heart appears to be stable without evidence of right heart congestion. If clinical signs suggestive of pulmonary hypertension, lowest effective dose Sildenafil BID with clinical monitoring would be reasonable. Additional contributing factors to the cough and potential collapsing episode may include body condition/Pickwickian Syndrome, chronic lower airway disease and respiratory support indicated. Current anesthetic risk is considered mild to moderate. Recheck echo suggested in 6 months, sooner if progressive clinical signs suggestive of left heart disease or pulmonary hypertension. If required, the following protocol is suggested. 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.



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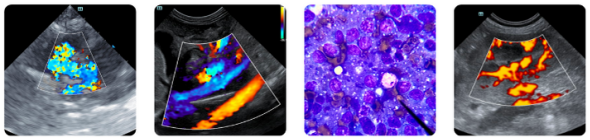

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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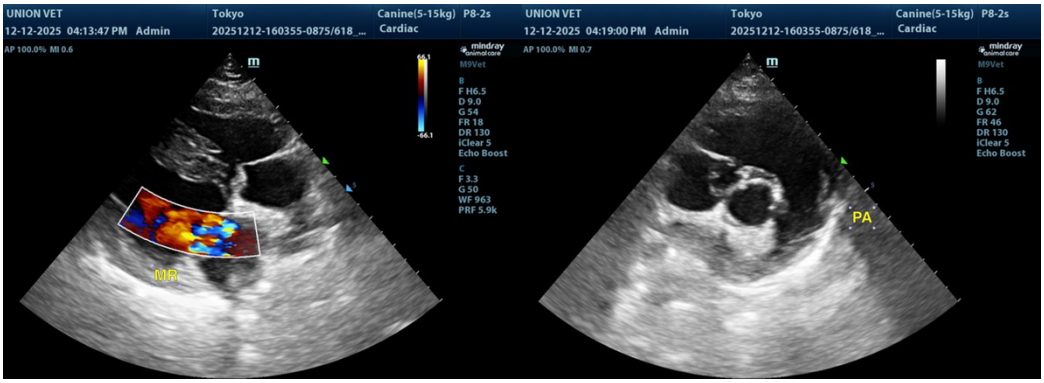

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

info@sonopath.com