



PATIENT

Ruby Chung

SPECIES

Canine

BREED

Pomeranian

SEX

SF

AGE

13 years

WEIGHT

11.10 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Paul Kim

HOSPITAL NAME

Ridgefield Park AH

REFERRING VET

Dr. Paul Kim

INVOICE

12296

DATE

9/24/21

PRESENTING CLINICAL SIGNS

In June 2021, the patient was seen and upon exam and x-rays a collapsed trachea was diagnosed. On September 17th, 2021, the patient was taken in and upon exam the doctor noted a 5/6 heart murmur. An echocardiogram was recommended and was done today, September 24th, 2021.

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	6.2	1.8	NM	1.36	41.4	74.9	0.15
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	NM	1.75	1.3		2.2	2.2	

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 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.



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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Chronic mitral valve disease (ACVIM B1)
- Minor tricuspid valve insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This study is consistent with chronic degenerative changes with secondary mitral valve insufficiency. Mild tricuspid valve insufficiency was also noted, yet not consistent with clinical pulmonary hypertension. The lack of left atrium enlargement implies that the risk of complication is low at this time. However, the prognosis is highly variable.

No indication for cardiac medications. Echocardiographic monitoring is suggested for further prognosis with an initial recheck in 6-12 months, sooner if clinical signs consistent with heart disease develop. Screening blood pressure is advised, due to the mitral valve insufficiency velocity (>6 m/s).

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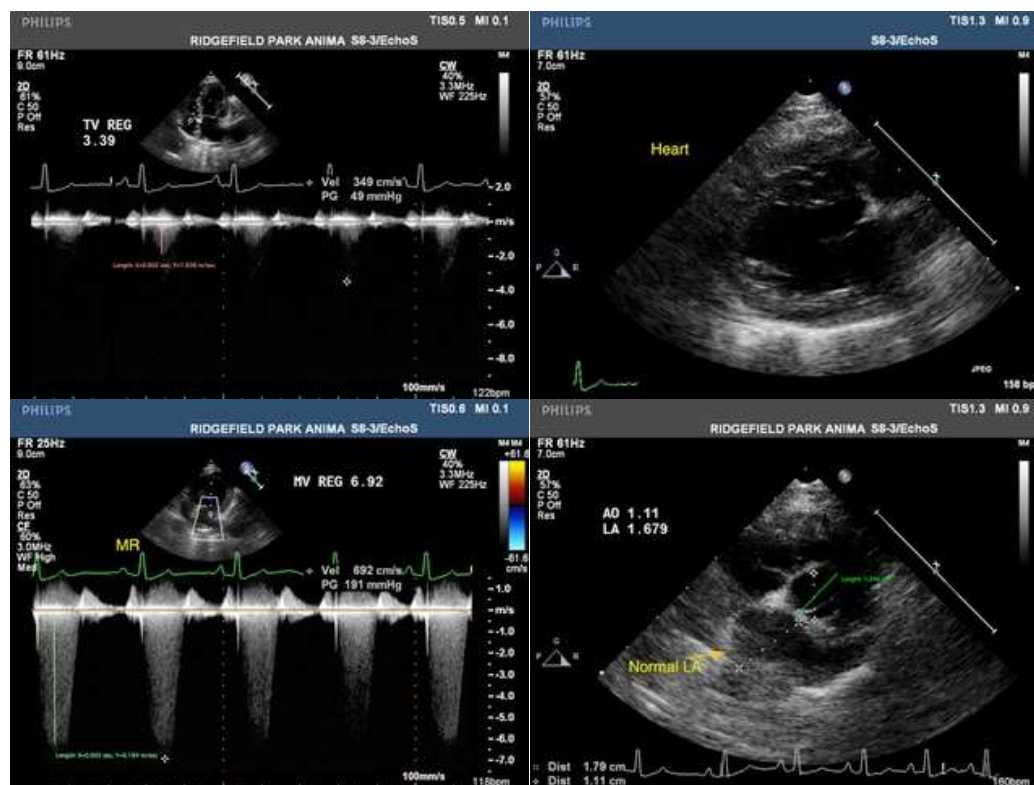
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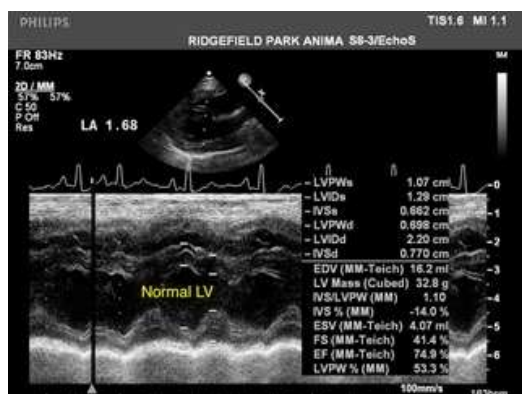
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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