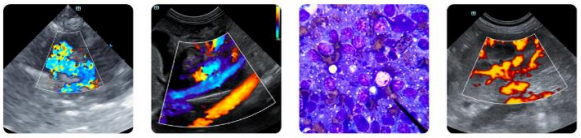

PATIENT

Charlie Chen

SPECIES

Canine

BREED

Maltese

SEX

NM

AGE

11 years 9 months

WEIGHT

2.85 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Rebecca Hamilton

HOSPITAL NAME

BondVet Edgewater

REFERRING VET

Dr. Bjorsund

INVOICE

10645

DATE

2/24/26

PRESENTING CLINICAL SIGNS

History:

- Several weeks ago, Pet had an episode after gettting excited where he yelped, collapsed, was recumbent briefly, then recovered immediately and was normal afterward.
- Grade 5/6 heart murmur on PE (2/21/26)
- Limited medical hx due to patient being adopted late in life.

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	5.6	-	-	1.6	45	78	0.2
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	165	1.1	0.8	2.85 kg	2.2	2.2	-

Cardiac Presentation

The echocardiogram in this patient demonstrated borderline to mild increased **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric MR (5.6 m/s). 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 cardiac / pericardial tumors was visible.

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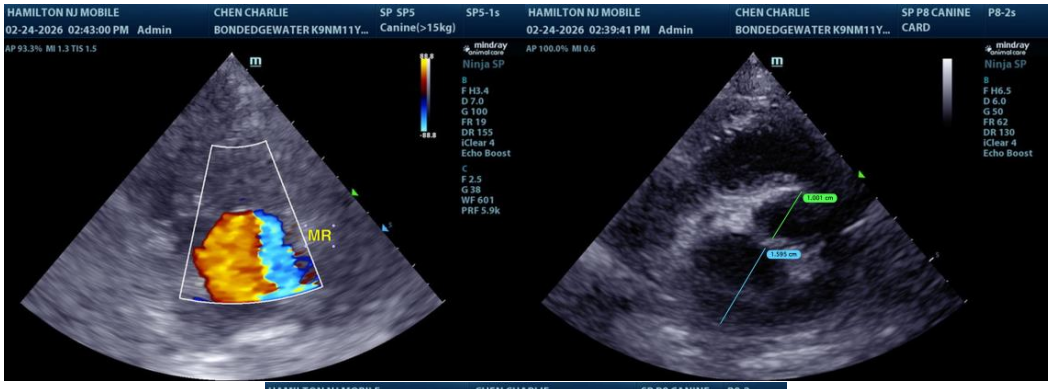
ULTRASONOGRAPHIC FINDINGS

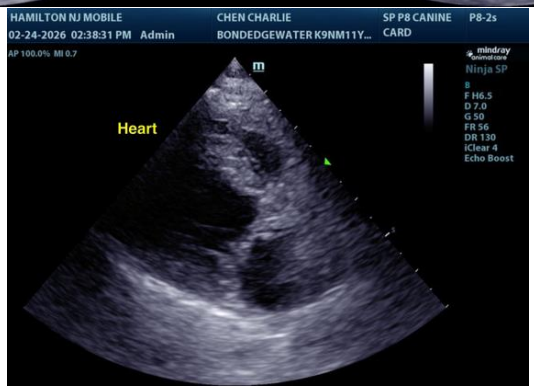
- Chronic mitral valve disease (ACVIM early to mild B2)

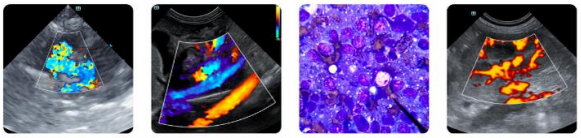
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The borderline to mild left atrial enlargement implies that the risk of complications secondary to mitral valve insufficiency is mildly elevated, yet overall the heart appears stable. No other clinical issues such as LV systolic dysfunction or clinical pulmonary hypertension. This patient is considered borderline for the use of Pimobendan, yet given evidence of mild increased LA enlargement, Pimobendan 0.3 mg/kg BID is recommended. No overt indication for additional medication. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs arise. Anesthetic risk is considered mild. If required, the following protocol is suggested. ECG and assessment of systemic BP to assess for complicating factors, given patient episode, may be considered.

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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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