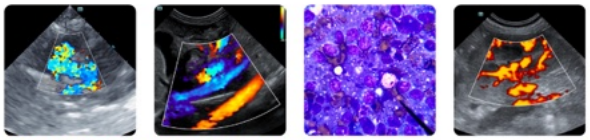


PATIENT

Ruby Deimling

SPECIES

Canine

BREED

King Charles Cavalier

SEX

Spayed female

AGE

12 years

WEIGHT

10.2 kg

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Cassie Jackson

HOSPITAL NAME

Huntsville AH

REFERRING VET

Dr. Jackson

INVOICE

69339

DATE

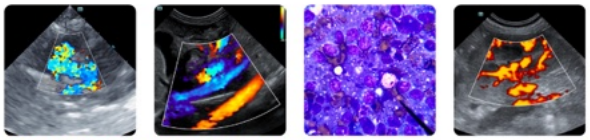
12/16/25

PRESENTING CLINICAL SIGNS

History: - Presented for second opinion due to episodes of head bobbing, followed by weakness and collapse, but no loss of consciousness. These episodes are new for Ruby. Episodes initially suspected to be seizure activity as Ruby has a history of idiopathic epilepsy, however cardiac arrhythmia was appreciated on auscultation so wanting to assess for heart disease - irregularly irregular rhythm with intermittent dropped beats on auscultation, did not appreciate a murmur - Current meds: - Phenobarbital 15 mg PO SID in the evening. - Levetiracetam (Keppra) 250 mg PO TID. - Meloxicam (Metacam) 7 kg dose PO SID. - Severe dental disease and multiple masses also present Abnormal PE/Chem/CBC/UA Results: ECG: The ECG reveals the presence of sinus arrhythmia with occasionally seemingly early complexes although based on the timing, P wave morphology, and PR interval, these could represent early sinus complexes associated with the sinus arrhythmia rather than pathologic atrial premature complex (APC). Supraventricular arrhythmias are most commonly associated with cardiac conditions that cause atrial enlargement; however, they can also be identified in patients with metabolic disease, wide variations in autonomic tone, congenital conduction system abnormalities, and possibly intra-abdominal disease. The R wave amplitude is increased; this may suggest ventricular enlargement but can also be identified as a normal patient variant. BW: - M1 elevated lipase, rest NSF

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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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CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO**	**LA/AO** (Heart Base)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.2	0.95	45		0.1
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	80			10.2 kg	3.1	2.7	

ULTRASONOGRAPHIC FINDINGS

Stage B1 valvular disease, compensated at this time.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further spectral Doppler assessment with lower frequency of the left ventricular and right ventricular outflow tracts as well as the mitral and tricuspid valves would be ideal. However, there was no evidence of volume overload or pressure overload in this patient. This is consistent with stage B1 valvular disease.

The heart is stable without clinical disease. No overt contraindication for anesthesia of brief to moderate duration. I suggest Torbutrol premed, Propofol induction, Isoflo maintenance or similar protocol if anesthesia is desired. Blood pressure recommended if not already performed and target white coat negative systolic pressure of < 160 mmHg. If higher than this ACE-inhibitor is suggested to reach this level. Recheck echocardiogram is recommended in 6 months, earlier if murmur grade increases or clinical signs initiate.

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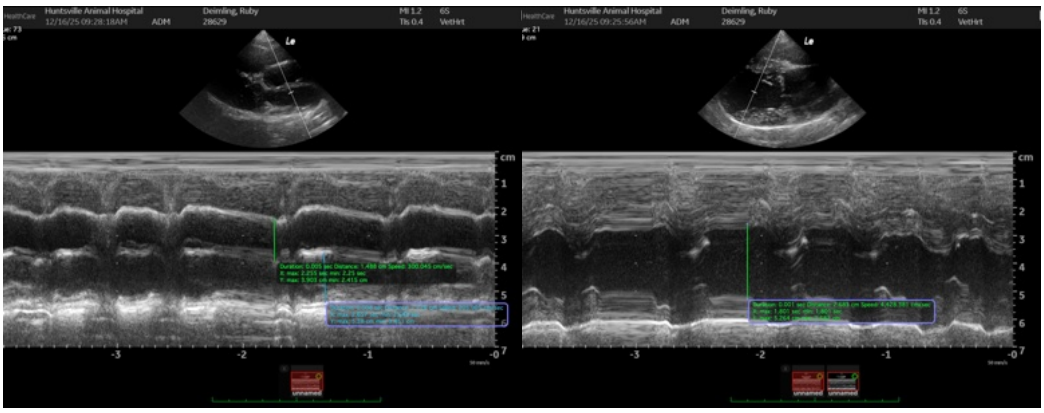

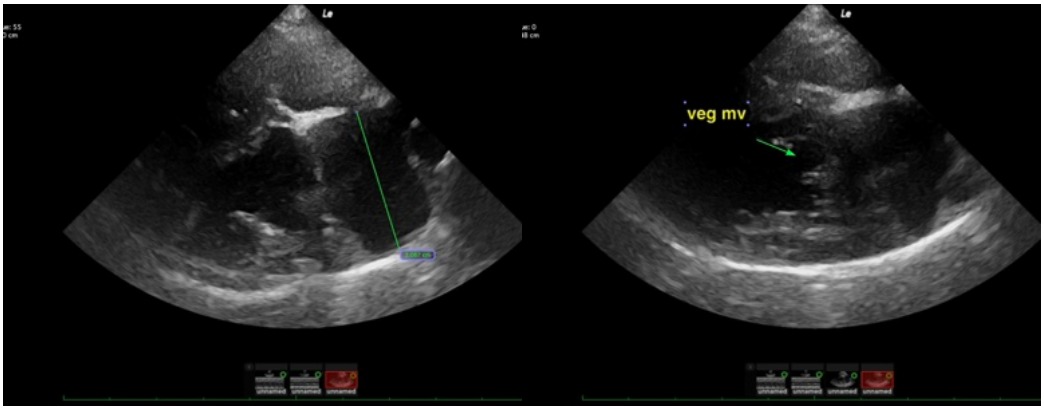

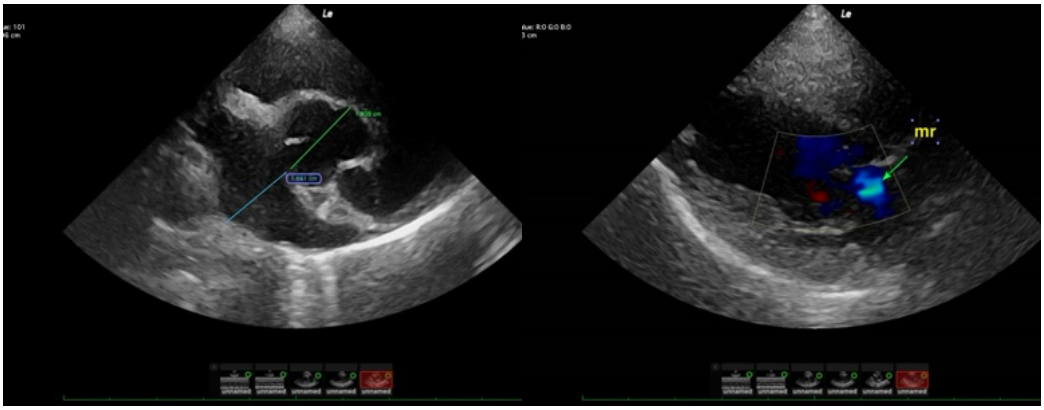

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP (CFM), Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com