



PATIENT

Jethro Moran

SPECIES

Canine

BREED

Cavalier King Charles
Spaniel

SEX

MI

AGE

7 years

WEIGHT

30 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Ark Animal Hospital

REFERRING VET

Dr. Parker

INVOICE

13837

DATE

5/10/22

PRESENTING CLINICAL SIGNS

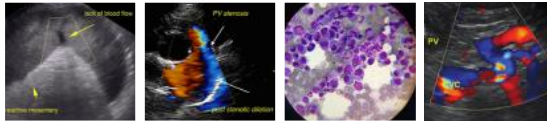
Hx: P presenting for evaluation of lump on belly - mildly inflamed integ over non-reducible umbilical hernia. -CV: 3/6 murmur (novel) with multiple pulseless premature beats auscultated. No clinical signs of CHF, decreased energy or syncope events. -M/S: O reports P yelps occ when picked up, but unable to replicate during exam. P slightly resistant to extension of neck and won't extend hips fully. P won't allow abdominal palpation but O reports very normal for him to be sensitive in hind end. Great energy and mobility at home.

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	<1.3	28-40	40-100	<0.6
PATIENT	6.0	<1.0	1.51	1.55	48	83	0.22
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				
PATIENT	138	1.3	1.4		3.2	2.5	

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Minor deviation of the interatrial septum towards the right atrium, which may suggest mild increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented mild vegetative thickening consistent with endocardiosis. Doppler indicated measurable 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 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).



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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. No overt evidence of arrhythmia was evident.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM Early B2)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to myxomatous mitral valve changes and secondary eccentric mitral valve insufficiency. The hemodynamic effects of the mitral valve insufficiency appear to be relatively mild at this stage, given the mild left atrial enlargement. The heart appears to be compensated at this time. However, prognosis at this stage is highly variable and serial sonographic monitoring is required for further prognosis.

In a nonclinical patient with only mild left atrium enlargement, cardiac medications are not specifically indicated. No other clinical issues such as evidence of LV systolic dysfunction or clinical pulmonary hypertension as a potential cause of possible syncopal episodes were present. Initial institution of baseline resting respiration rate monitoring could be considered. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease arise.

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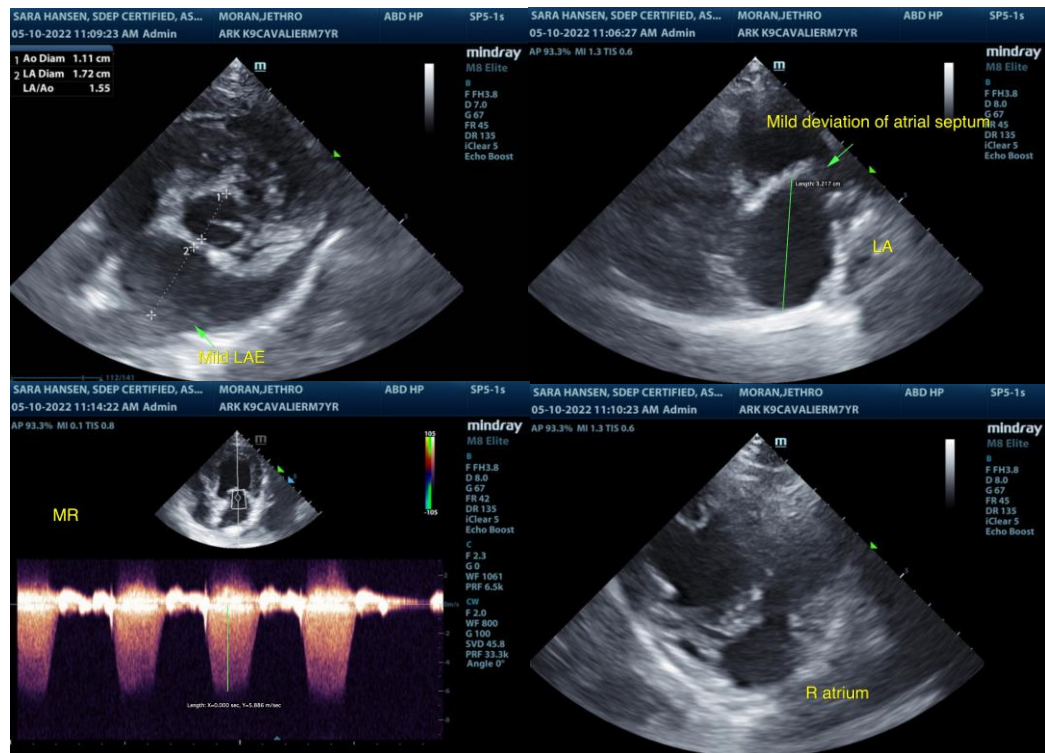
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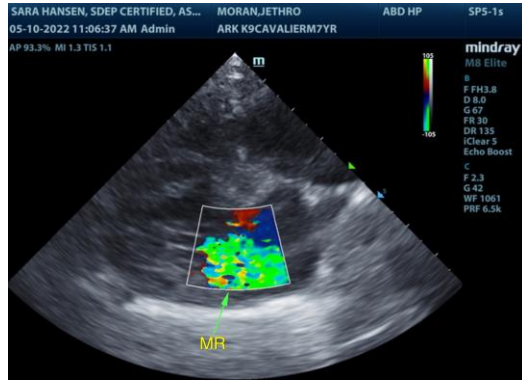
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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