



## PATIENT

Corabay Kinner

## SPECIES

Canine

## BREED

Mix

## SEX

Female Spayed

## AGE

2 years

## WEIGHT

33.8lbs

## PRESENTING CLINICAL SIGNS

History: Presented for evaluation of episodes of collapse/suspected syncope. Patient has had 5 reported episodes of collapse where she falls over, unresponsive, and quickly returns to normal. Urinated one time during an episode. Heart murmur auscultated as a puppy but not heard since until today. BP: 175, 160, 155mmHg.

-ECG report (Idexx): NSR with tall R waves. LAD.  
-CXR report (Idexx): VHS: 11.12. VLAS: 1.7, RHE. No CHF.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is abnormal with abnormal closure and elongated leaflets. Mild eccentric mitral regurgitation. Normal velocity. No left atrial dilation. No LV dilation with adequate function. Normal LV wall thickness. Abnormal mitral valve motion seen on 2D imaging. While a septal defect is not clearly seen, color flow is suggestive of a possible VSD (see below). Difficult to definitively identify on 2D imaging. Flow is L-R. The tricuspid valve appears thickened and elongated with mild dysplasia. Mild tricuspid regurgitation. Mildly elevated velocity. Minimal right atrial/ventricular enlargement is appreciated (subjective). No obvious hypertrophy. The pulmonic valve is normal in morphology and mobility. No obvious narrowing seen. Normal pulmonic outflow velocity. Mildly increased in aortic outflow velocity seen on spectral doppler, likely due to SAM. The aortic valve appears normal. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac tumors seen. No obvious congenital shunts.

## CARDIAC CHART

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

A. Nicastro, DVM

## HOSPITAL NAME

Flowertown Animal  
Hospital

## REFERRING VET

Dr. Pignatello

## INVOICE

31867

## DATE

7/17/23

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	5.5	3.3	NM	1.2	37	70	NM
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	2.3	1.4	15.3	2.6	3.5	2.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unusual case. Several relatively mild abnormalities are identified in this study. Both the mitral and tricuspid valves appear dysplastic, with mild mitral and tricuspid regurgitation. The atria are both normal, suggesting a lack of elevated filling pressures. There is suspicion for a VSD/endocardial



## PATIENT

Corabay Kinner

## SPECIES

Canine

## BREED

Mix

## SEX

Female Spayed

## AGE

2 years

## WEIGHT

33.8lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

A. Nicastro, DVM

## HOSPITAL NAME

Flowertown Animal  
Hospital

## REFERRING VET

Dr. Pignatello

## INVOICE

31867

## DATE

7/17/23

cushion defect although the finding is inconclusive. Suspicion is high based upon the totality of the findings. The right heart is minimally enlarged inconsistent with the radiograph report and echo findings, which is difficult to explain. A mild LVOTO is noted, likely due to abnormal mitral valve motion. It is important note that small defects are easily missed in congenital cases without advanced imaging. **Referral to a local Cardiologist should be considered in this case to confirm the findings in light of the recent syncope.**

Given these findings, we do not have a clear explanation for the patients' syncopal episodes. The ECG report suggests no arrhythmias are present and no CHF is documented on the CXR. Even if an endocardial cushion/VSD is present, this is difficult to clearly tie to the syncope without significant chamber enlargement. While extra cardiac shunts remain possible, you would expect to see more significant right heart changes if present making this less likely. At this time, the cause of syncope remains open.

If referral is declined, there is no indication for medications at this time. Serial echocardiography is recommended lifelong to continue assessment for progression and risk for complication going forward.

Monitor for development of labored breathing, exercise intolerance or collapse episodes lifelong.

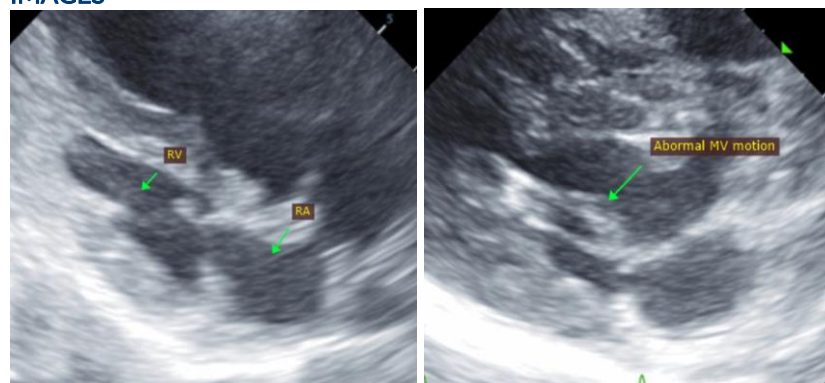
Anesthesia is not advised prior to further evaluation.

## PLAN

No medications are clearly indicated at this time. Referral is recommended in this complicated case. If referral is declined and syncope persists, a holter monitor, repeat echocardiogram with a bubble study, etc could be considered. Depending on the situational component of the episodes, a neurologic evaluation may also be warranted.

If referral is declined, recommend recheck echocardiogram in 4-6 months to screen for progression, sooner if clinical signs arise.

## IMAGES





**PATIENT**

Corabay Kinner

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Female Spayed

**AGE**

2 years

**WEIGHT**

33.8lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING  
PERFORMED BY**

A. Nicastro, DVM

**HOSPITAL NAME**

Flowertown Animal  
Hospital

**REFERRING VET**

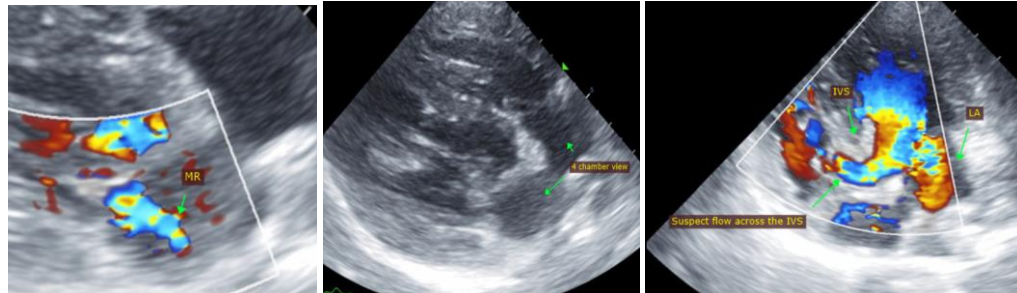
Dr. Pignatello

**INVOICE**

31867

**DATE**

7/17/23



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com