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**PATIENT**

Olivia Williams

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Female Spayed

**AGE**

6.25.10

**WEIGHT**

12lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Andi Parkinson, RDMS

**HOSPITAL NAME**

Parkville Animal  
Hospital

**REFERRING VET**

Dr. Slovan

**INVOICE**

22856

**DATE**

2.28.22

**PRESENTING CLINICAL SIGNS**

History: Heart murmur, grade 2/6 HM, holosystolic, PMI left side. Asymptomatic.

-Pertinent abnormal PE/Chem/CBC/UA Results: BNP elevated 180.

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous.

-STAT: Not requested

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is mildly hyperechoic endocardium consistent with fibrosis. The anterior leaflet of the MV appears normal. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. No TR. Blood flow through the RVOT is normal. Blood flow through the LVOT is turbulent on color flow; mildly elevated velocities captured on Doppler. There is trivial mitral regurgitation. No AI. No PI. There is no pleural or pericardial effusion seen. There are no obvious cardiac tumors.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	5.4	165	0.5	1.3	0.51	50	92
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)		LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	1.4	1.2		1.6	1.6	NM

Adapted from June Boon, Veterinary Echocardiography, 1998  
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

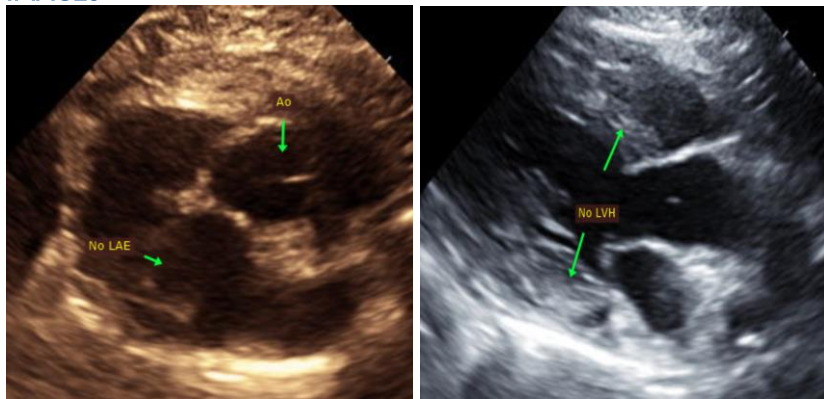
Essentially normal cardiac structure and function. The murmur is due to a mild dynamic LVOT obstruction, secondary to elevated heart rates. The valve itself appears normal, and this is likely a benign finding due to stress/tachycardia (particularly in light of normal LV wall thickness). Monitoring is advised however, to ensure a lack of progression going forward. Serial echocardiography will be necessary to ensure lack of progression and development of hypertrophy going forward.

In patients with persistent LVOT obstruction and an elevated pressure gradient, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a mild obstruction and a normal left atrial dimension/no LVH, no medications are clearly indicated.

Anesthetic risk is currently low. Avoid heart rate stimulating drugs (atropine, glycopyrrolate) unless clinically necessary. Avoid vasodilators such as acepromazine as this can worsen obstruction. Judicious IV fluid rates are recommended to avoid fluid overload in this patient with diastolic dysfunction.

A recheck echocardiogram is recommended in 6-12 months, sooner if any clinical signs arise.

## IMAGES



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.

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