



## PATIENT

Oreo Clements

## SPECIES

Canine

## BREED

Shihtzu

## SEX

Male (N)

## AGE

12 years

## WEIGHT

20

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Nicole Gotfredson

## HOSPITAL NAME

Buffalo VC

## REFERRING VET

Dr. Teresa Bessler

## INVOICE

16050

## DATE

2/7/23

## PRESENTING CLINICAL SIGNS

grade 2 dental disease but heart murmur has gone from grade 1 to grade 4. Recommend echo before proceeding with dental. Lungs are clear and no cough.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>				1.2	48	82	0.1
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	NM	NM		3.1	2.95	

## Cardiac Presentation

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 moderate thickening consistent with endocardiosis. No overt valvular prolapse was noted. 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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## ULTRASONOGRAPHIC FINDINGS

- Overall, normal cardiac structure and function
- Thickened mitral valve, consistent with endocardiosis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with chronic degenerative valvular changes with mitral valve insufficiency. The lack of left atrium enlargement indicates that the current and future risk secondary to MR is low. No other clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension.

In a nonclinical patient without evidence of significant chamber enlargement, cardiac medications are not indicated. Prognosis is variable and sonographic monitoring is recommended. No overt anesthetic contraindications are noted. The following anesthetic protocol is suggested. Recheck echocardiogram is recommended in 6-12 months, sooner if clinical signs arise.

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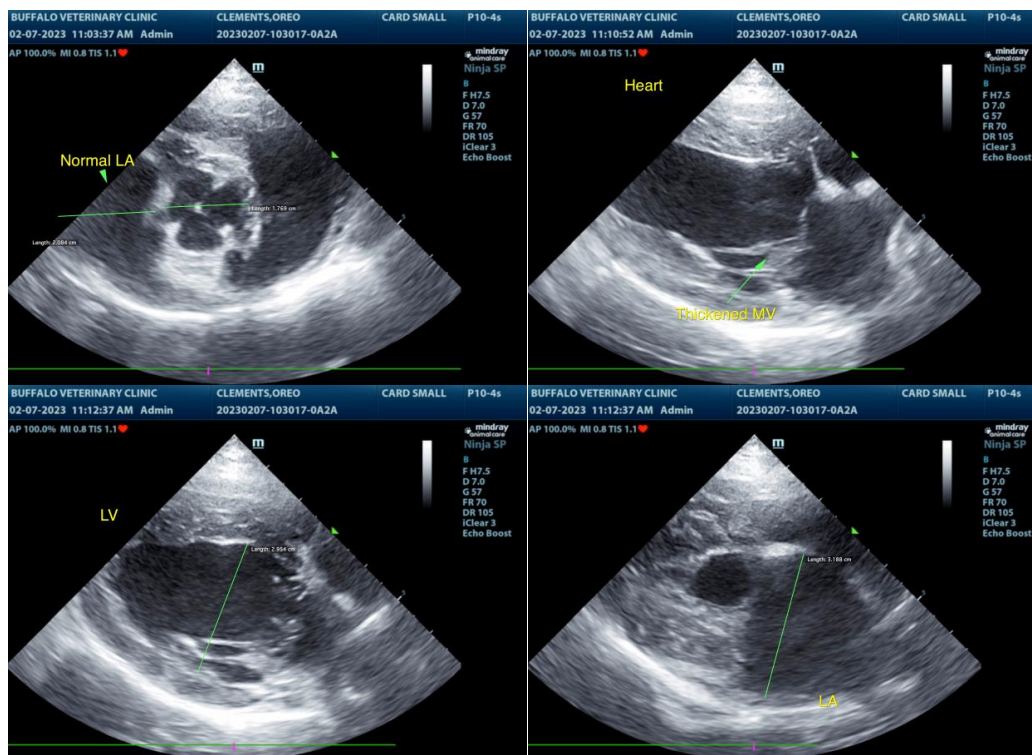
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



**PATIENT**

can be of any further assistance please contact me.

Oreo Clements

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**info@SonoPath.com**

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