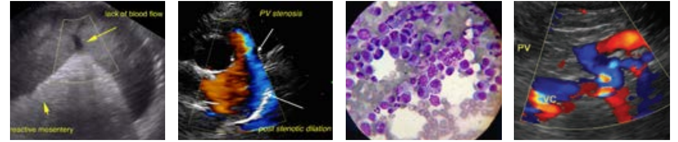
SonoPath

Clinical Sonography & Telecytology



EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Bella Salinas

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

8 Years 4 Months

WEIGHT

5.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Jessie Evoniuk

HOSPITAL NAME

State Ave Vet

REFERRING VET

Dr. Jessie Evoniuk

INVOICE

25743

DATE

9/23/21

PRESENTING CLINICAL SIGNS

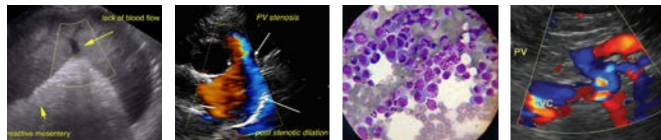
Longtime heart murmur. 2019- AV valvular insufficiency concern from rads. January 2020 presented for cough, increased RR. Rads showed L cardiomegaly and early cardiac decompensation with L caudal lung lobe cardiogenic edema (radiologist reviewed rads). Echo declined at that time. Started triple therapy with O noted clinical improvement. Presented today for pre-anesthetic assessment. Severe dental disease. Objective Potentially fractious. Muzzled. E/e clear. Teeth- mobile/missing teeth. Severe dental calculus. Heart- G3 heart murmur, left systolic. Lungs clear. No cough. BCS 6/9. Abd- tense. SM LN WNL. BP 146/128, 82/64 (this reading took longer than usual), 119/104 Assessment Heart murmur- assessment of cardiac compensation

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	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.92	42.1	76.5	0.25
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	Est 90	NM	0.82		1.9	1.95	

Cardiac Presentation

The echocardiogram for this patient presented moderately excessive **left atrial size** expressed both in the LA/AO and LA max measurements Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric insufficiency. No overt evidence of mitral valve prolapse or chordae tendineae rupture. The **left ventricle** presented normal thicknesses with primarily linear contour and subjective mild increased left ventricular volume. 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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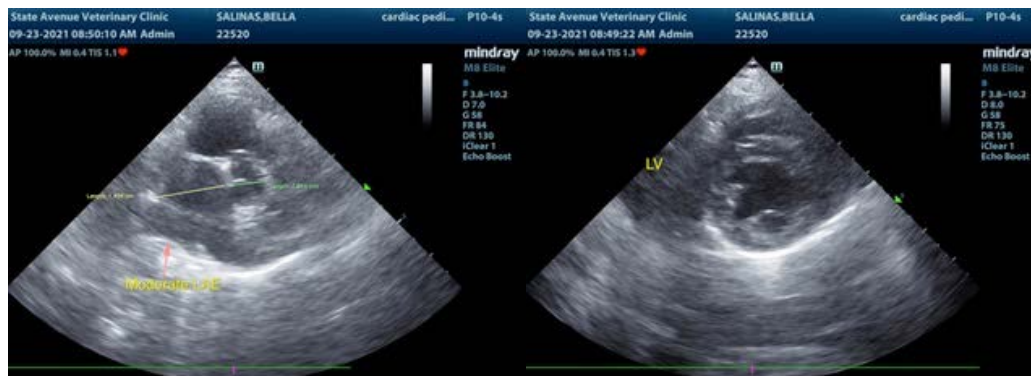
ULTRASONOGRAPHIC FINDINGS

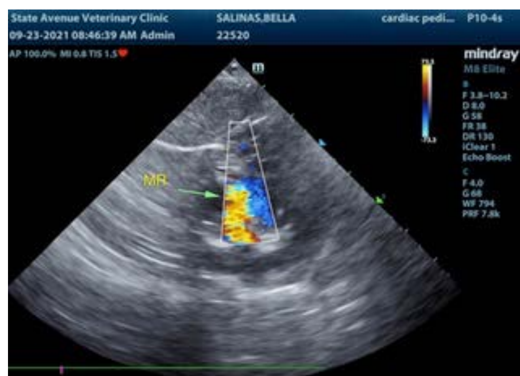
- Chronic mitral valve disease (current ACVIM B2)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. No other clinical issues such as systolic dysfunction were noted with unlikely potential for concurrent clinical pulmonary hypertension, although potential for low-grade pulmonary hypertension cannot be definitively excluded. The moderate left atrial enlargement indicates that the risk of complication going forward is elevated. Continued triple therapy is recommended with continued monitoring of systemic blood pressure and renal parameters.

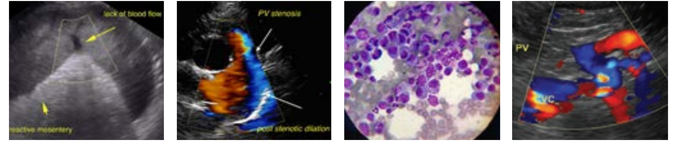
This patient is considered an increased anesthetic risk as well as increased potential for fluid overload. If anesthesia is required, judicious anesthetic fluid use as well the recommended anesthetic protocol may be considered. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists. Recheck echocardiogram suggested in 6 months sooner if recurrent clinical signs consistent with heart disease i.e., pulmonary edema, increased resting respiration rate, exercise intolerance, syncope, etc. are noted.





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. 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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