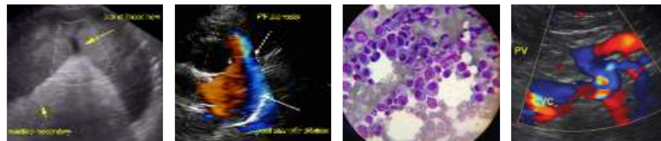
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Skylar Westra

SPECIES

Canine

BREED

Chihuahua

SEX

FS

AGE

13 years

WEIGHT

4.3

INTERPRETED BY

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

IMAGING PERFORMED BY

Jeanine French

HOSPITAL NAME

Fredon AH

REFERRING VET

Dr. Linda Grau

INVOICE

12937

DATE

12/30/21

PRESENTING CLINICAL SIGNS

HM Radiographic evidence of enlargement Current Meds: Furosemide 0.25ml BID Enalapril: 2.4mg 1/4 tab sid

Abnormal PE/Chem/CBC/UA Results: BNP: 2855

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	5.4	3.0	1.6	1.47	39	72	0.20
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	174	1.0	0.8		2.1	2.1	

Cardiac Presentation

The echocardiogram in this patient demonstrated mildly enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented 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 mild increased size with overall normal structure and content. No evidence of masses or spontaneous contrast was noted. **Tricuspid** valvular assessment demonstrated concurrent mild thickening with subjective mild to moderate insufficiency on color doppler. The **right ventricle** exhibited mild prominent size compared to the left ventricle with normal myocardial echogenicity and overall 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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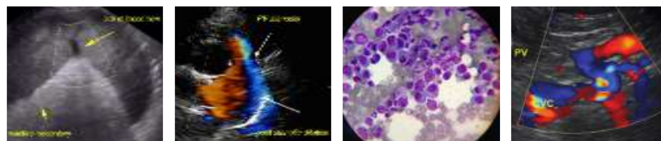

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ULTRASONOGRAPHIC FINDINGS

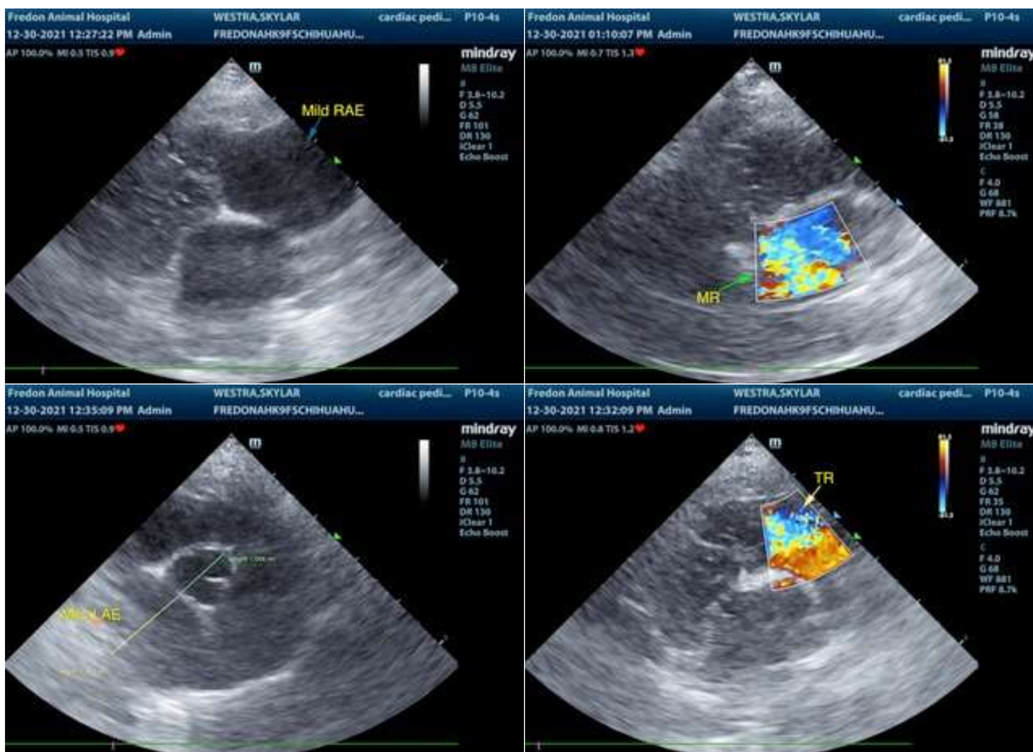
Primary Findings

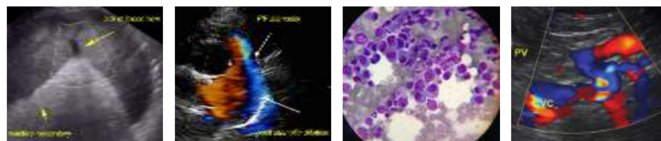
- Chronic mitral valve disease (ACVIM - early to mild B2)
- Mild RA / RV enlargement with TV insufficiency

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to chronic degenerative valvular changes with both mitral and tricuspid valve insufficiency. The lack of significant left atrium enlargement indicates that the risk of current and future complication secondary to mitral valve insufficiency is relatively low at this stage. The estimated pulmonary pressure gradient based on TV insufficiency velocity is consistent with mild pulmonary hypertension (approximately 36 mmHg). This estimated pulmonary pressure is not overtly consistent with clinical pulmonary hypertension if not clinical signs suggestive of pulmonary hypertension i.e., coughing, syncope, exercise intolerance, etc., are present.

Pimobendan 0.3 mg/kg PO BID is warranted, as this medication may help prolong cardiac changes associated with mitral valve insufficiency. No Indication for diuretic therapy unless evidence of pulmonary edema is present. Likewise, Enalapril may be considered if BP >130, yet not indicated if BP <130. Continued monitoring for clinical signs associated with pulmonary hypertension is recommended. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with left-sided heart disease or clinical pulmonary hypertension are noted.





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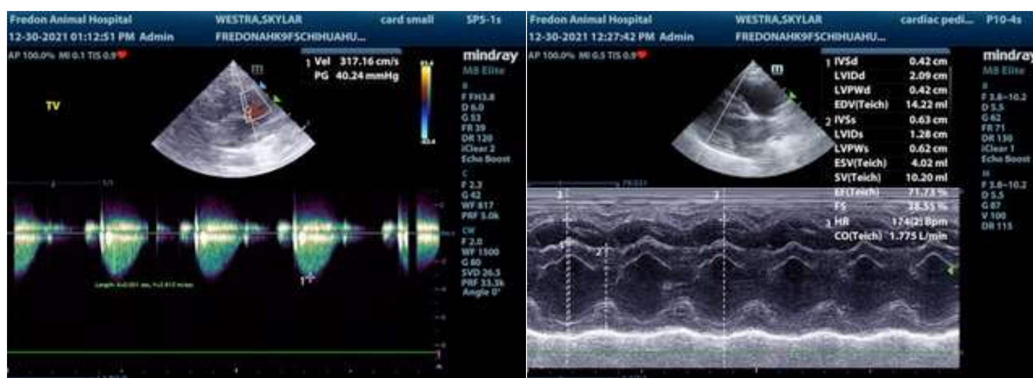

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com