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Clinical Sonography & Telecytology
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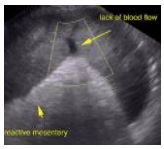
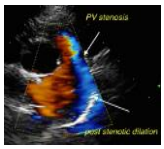
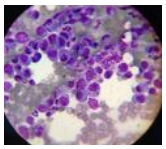
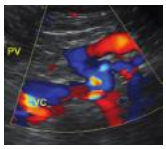

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Marley Grunden

SPECIES
Canine

BREED
Mix

SEX
MN

AGE
8 yr

WEIGHT
47

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

IMAGING PERFORMED BY
Tasha

HOSPITAL NAME
Dillsburg VC

REFERRING VET
Dr. Crow

INVOICE
10597ag

DATE
5/13/2022

PRESENTING CLINICAL SIGNS

History: Murmur diagnosed 2021; Now 4/5 holosystolic murmur with 2-3/5 musical murmur.

Abnormal PE/Chem/CBC/UA Results: All BW WNL; waiting on EKG results

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	<1.3	28-40	40-100	<0.6
PATIENT			NM	NM	44.7	7.94	0.35
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	NM	NM	NM		4.9	4.25	

Cardiac Presentation

The echocardiogram in this patient demonstrated subjective mild increased atrial size based on a single LA measurement method. The cranial and caudal mitral valve leaflets presented mild vegetative thickening consistent with early onset 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 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.

ULTRASONOGRAPHIC FINDINGS

- Subjective eccentric mitral valve insufficiency
- Subjective mild LA enlargement, normal LV

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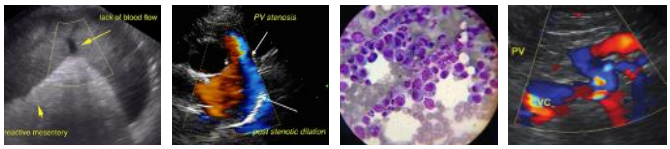

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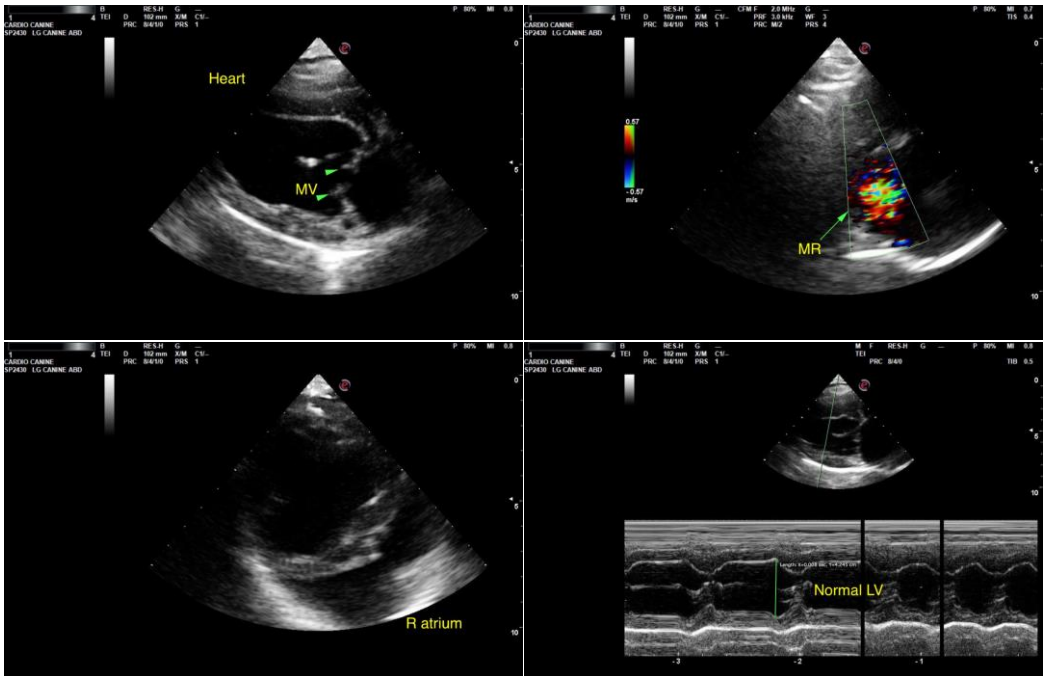
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with mild chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. Correlation with auscultation is suggested. This is most suggestive of early onset chronic mitral valve disease. The mild LA enlargement indicates that the risk is relatively low however serial sonographic monitoring is required for further prognosis. Overall, the heart appears to be compensated and clinical signs associated with this murmur are not expected at this stage. No indication for cardiac medications. Correlation with ECG assessment is recommended. Recheck echocardiogram recommended in 6 months sooner if clinical signs arise.



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 can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com