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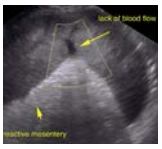
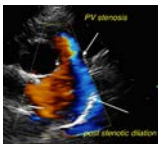
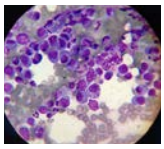
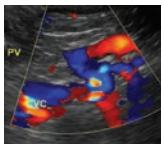

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1-800-838-4268 info@sonopath.com

PATIENT

Lacey Dunhao

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

11 Years

WEIGHT

Not Given

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

All Creatures Great & Small Denville

REFERRING VET

Dr. Mitrovic

INVOICE

25080

DATE

8/31/21

PRESENTING CLINICAL SIGNS

Grade IV-V/VI systolic murmur. Presented for routine exam for travel. No coughing. Rads: thorax lat/v/d. Cardiomegaly

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	5.0	2.6	NM	1.56	40.8	74	0.2
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	171	1.0	1.4		2.8	2.7	

Cardiac Presentation

The echocardiogram for this patient presented mild **left atrial** enlargement. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable 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. Color doppler assessment revealed mild tricuspid valve insufficiency.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

- Chronic mitral valve disease (Early ACVIM B2)
- Tricuspid valve insufficiency

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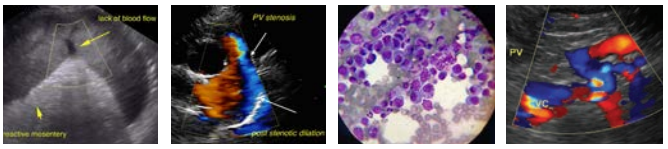

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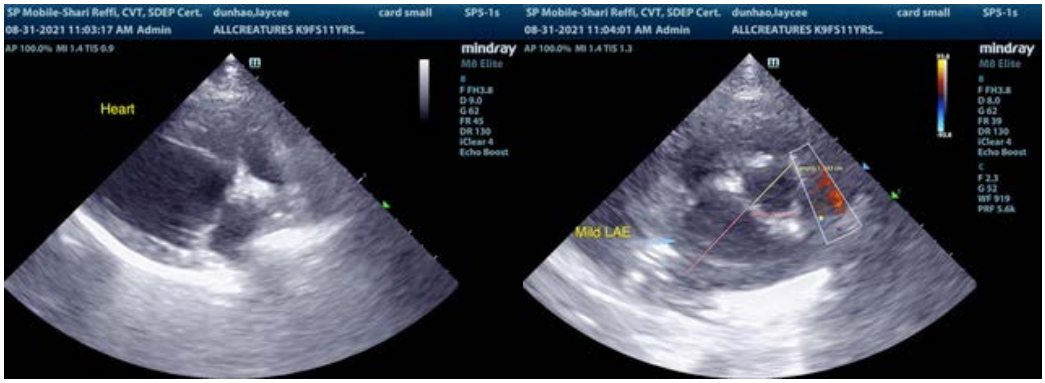
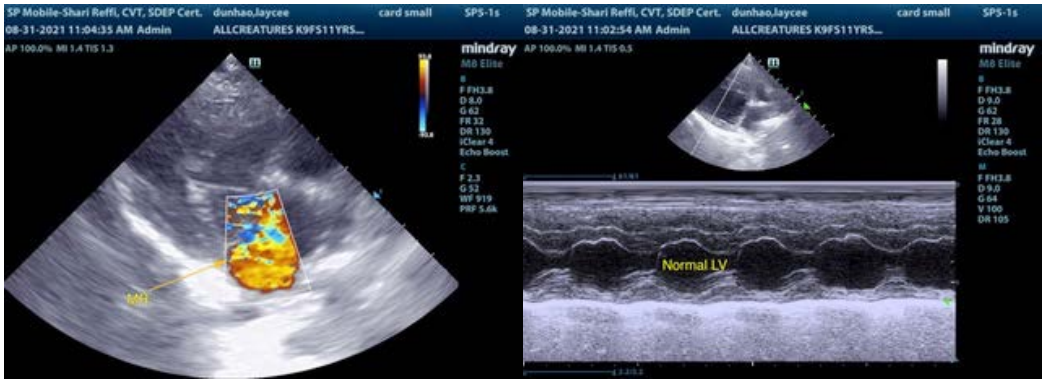
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of significant left atrial enlargement indicates that the risk of future complication is likely low, yet prognosis at this stage is highly variable. Concurrent mild tricuspid valve insufficiency was also present, yet not consistent with clinical pulmonary hypertension. No other clinical issues such as systolic dysfunction were identified. Given the lack of significant left atrial enlargement or increased left ventricular volume, no indication for cardiac medications at this time. However, given the variable prognosis, monitoring for evidence of clinical signs associated with cardiac disease is recommended. Recheck sonogram suggested in 6 months, sooner if clinical signs consistent with heart disease develop.





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