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Clinical Sonography & Telecytology
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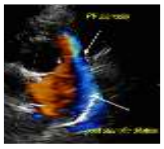
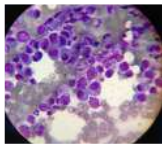
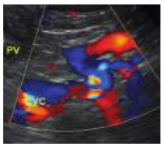

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1-800-838-4268 info@sonopath.com

PATIENT

Troy Marsilio

SPECIES

Canine

BREED

Puggle

SEX

MN

AGE

11 years

WEIGHT

46 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Glen Rock VH

REFERRING VET

Dr. Scott Stekler

INVOICE

13106

DATE

1/19/22

PRESENTING CLINICAL SIGNS

Patient presents for arrhythmia. No current meds. Bloods pending.

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	2.0	2.3	2.3	45.8	80.7	0.3
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	164	1.2	0.83		6.4	4.8	

Cardiac Presentation

The echocardiogram in this patient demonstrated severely enlarged **left atrial** size based on 3 different LA measurement methods. Deviation of the Interatrial septum toward the right atrium consistent with elevated left atrial pressure was present. Doppler indicated measurable eccentric to centralized insufficiency. 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 with increased left ventricle 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 concurrent mild vegetative thickening with mild insufficiency present on color doppler assessment. 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). Very minor visible **pericardial** free fluid was present without evidence of concurrent free pleura fluid. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Intermittent to consistent tachyarrhythmia was present. Brief sonographic assessment of the cranial abdomen revealed evidence of small volume ascites.

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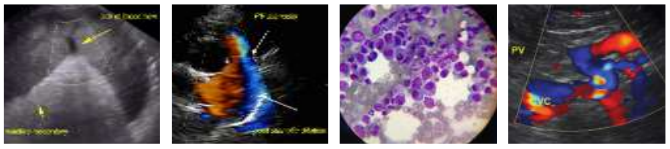

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Chronic mitral valve disease (ACVIM Stage-C)
- Tachyarrhythmia
- TV insufficiency - estimated pulmonary pressure gradient based on measured TV insufficiency not overtly consistent with clinical pulmonary hypertension
- Minor pericardial free fluid

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This echocardiogram is consistent with chronic to chronic degenerative valve disease causing significant eccentric mitral valve insufficiency. It Is likely that severe chronic valvular disease has progressed to severe left heart dilation with secondary arrhythmia. While structural disease predisposes to left-sided congestion, the rapid arrhythmia is suspected to predispose to right-sided congestion resulting in mild ascites. No other clinical issues such as systolic dysfunction were noted.

ECG assessment Is strongly recommended for further clarification of the arrhythmia and assessment for potential atrial fibrillation, given the degree of left atrium enlargement. Pimobendan 0.3 mg/kg PO BID, diuretic therapy including Furosemide / Spironolactone combination 1-2.0 mg/kg PO BID, +/- antiarrhythmic medication pending ECG assessment is suggested. Recheck heart rate and blood pressure In 5-7 days with target heart rate (<140). A blood pressure assessment is recommended if possible. If systemic blood pressure (>130), ACE Inhibitor mediations 0.5 mg/kg PO BID is suggested.

Unfortunately, this patient going forward is predisposed to episodes of congestive heart failure, malignant arrhythmias, and potential sudden death. Recheck echocardiogram Is suggested in 4-6 months, sooner if persistent CHF or arrhythmia.

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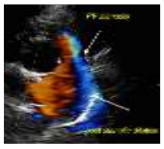
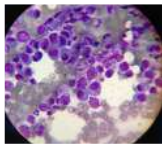
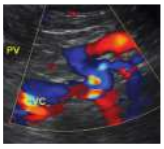

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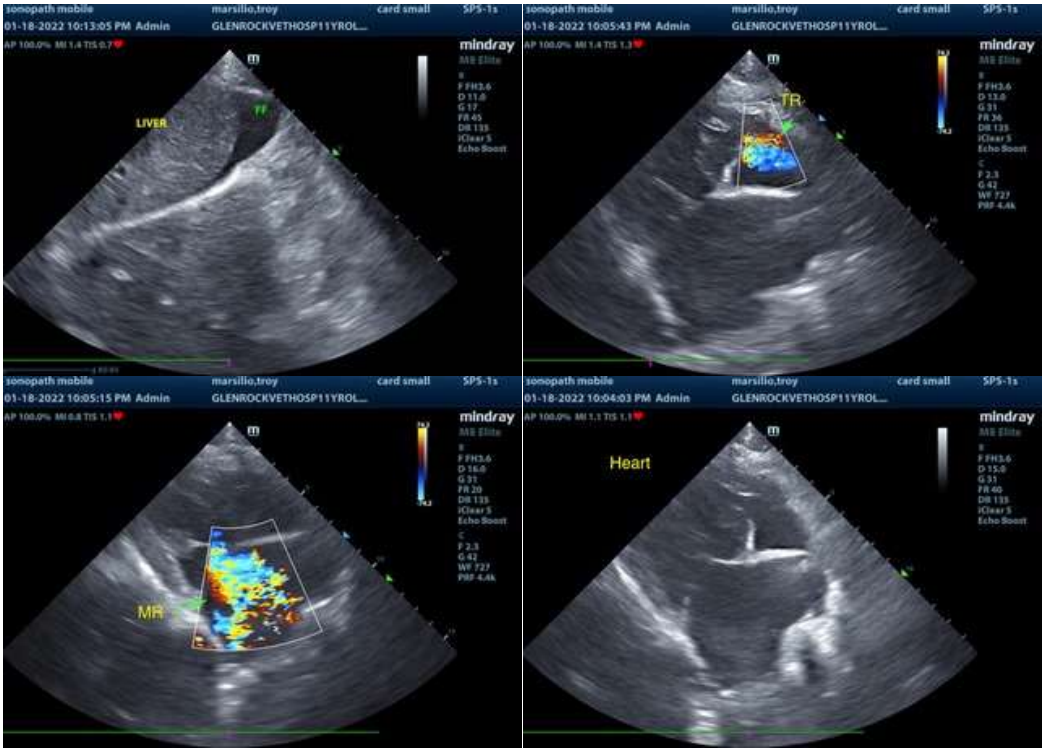

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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