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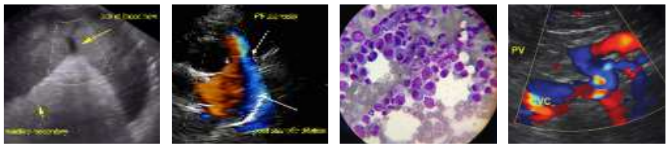
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Rocky Agony

SPECIES
Canine

BREED
Pomeranian

SEX
Neutered Male

AGE
12 years

WEIGHT
11.5

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

IMAGING PERFORMED BY
Kelly Vazquez

HOSPITAL NAME
Animal Paradise Hospital

REFERRING VET
Dr. Elshafie

INVOICE
13048

DATE
1/13/22

PRESENTING CLINICAL SIGNS

Tracheal and bronchial collapse, small right kidney; incidental finding. No reported meds.

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	5.8	<2.0	--	1.48	40.9	75.1	0.27
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	127	3.0	1.2		2.66	2.64	

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. No overt evidence of chordae tendinea rupture or valvular prolapse was noted. Doppler indicated measurable moderate insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented overall normal echogenicity with subjective evidence of mild myocardial remodeling likely associated with age. **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 mild turbulence and dynamic systolic flow with subjective moderate AV insufficiency on color doppler assessment. AV insufficiency measured 4.0 m/s in diastolic velocity. 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 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). 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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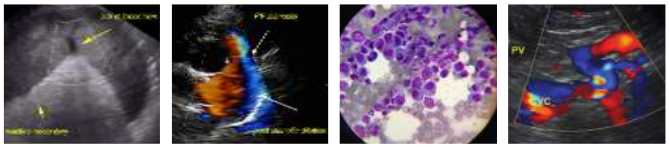

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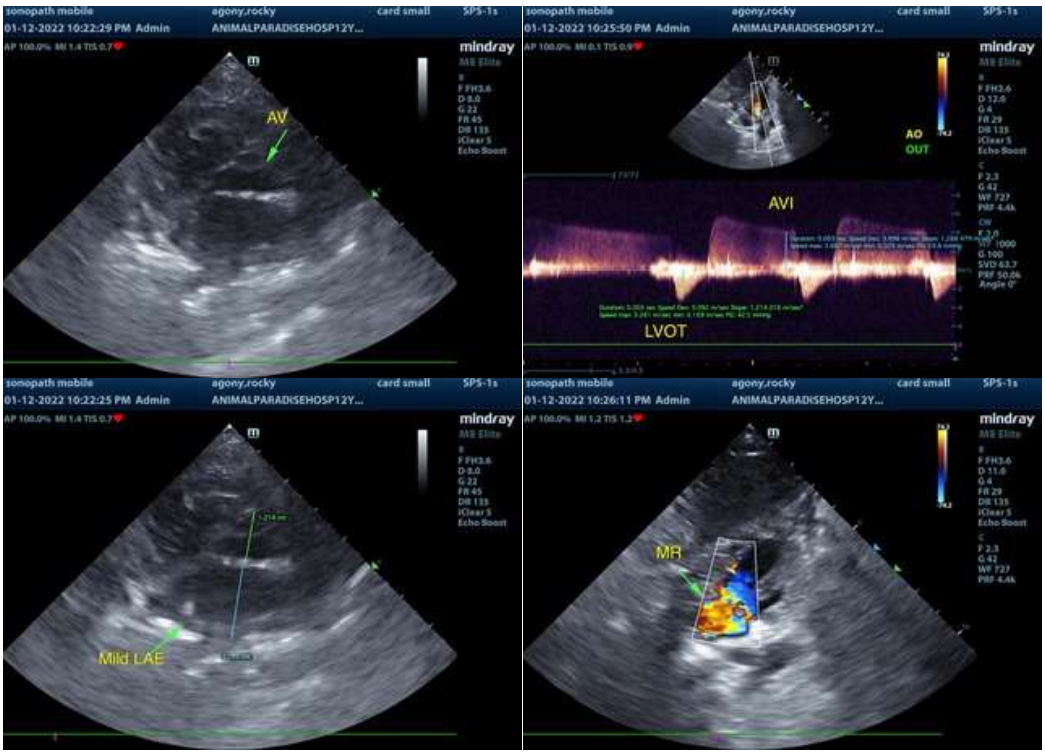
ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Chronic mitral valve disease (ACVIM B1)
- Elevated LVOT velocity with moderate AV insufficiency
- TV insufficiency - estimated pulmonary pressure gradient (<20 mmHg) not consistent with clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur If present is most likely secondary to chronic degenerative valvular changes with secondary eccentric mitral valve Insufficiency. If a diastolic murmur Is noted, this may potentially be owing to aortic valve insufficiency. The lack of significant left atrium or left ventricle enlargement with normal systolic function Indicates that the risk for complications secondary to mitral valve insufficiency is low. The elevated LVOT velocity Is nonspecific without overt evidence of significant aortic valve thickening or degenerative changes. Potential for aortic valve stenotic disease is considered less likely, yet cannot be excluded. No overt indication for cardiac medications at this stage. However, serial sonographic monitoring is recommended for further prognosis. Recheck echocardiogram is suggested in 4-6 months, sooner if clinical signs consistent with heart disease (exercise intolerance, syncope, increased resting respiration rate, etc.,), are noted.



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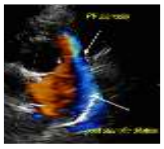
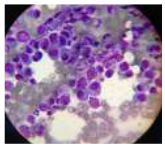
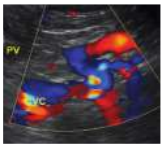

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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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