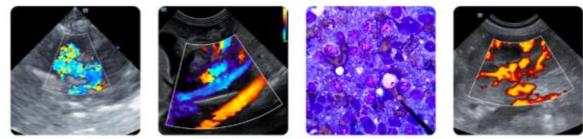
New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath FOSTERING THE ART OF VETERINARY MEDICINE™
www.SonoPath.com
info@sonopath.com 800.838.4268

PATIENT

Fox Decastro

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

11 Years

WEIGHT

23.1 pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Vincent Ravancho CVT

HOSPITAL NAME

New Bridge Vet Practice

REFERRING VET

Dr. Glennon

INVOICE

15579

DATE

04/30/26

PRESENTING CLINICAL SIGNS

Lethargy, mild cough. Grade II/VI murmur. R/o cardiac vs airway disease. Medications - doxycycline 100mg SID (in case of kennel cough)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

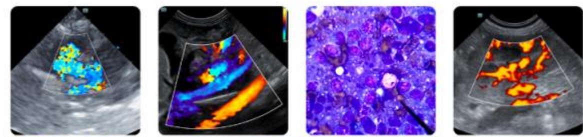
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	6.5	--	NM	1.6	39	71	0.2
CANINE CARDIAC PARAMETERS	**HR (BPM)**	**AV VMAX (m/s)**	**PV MAX (m/s)**	**BODY WEIGHT (lbs)**	**LAD** LA MAX 4 Chamber	**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	1.8	1.0	23.1	3.7	3.2	--

Cardiac Presentation

The echocardiogram in this patient demonstrated borderline to mild increased **left atrial** dimension with mild intra-atrial deviation based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. No evidence of valvular prolapse or chordae tendinea rupture. Doppler revealed measurable moderate eccentric MR. 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 cardiac / pericardial tumors was visible. Moderate pericardial lung interference and subjective pulmonary comet tail artifact. No evidence of hepatic congestion.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM emerging/mild B2).



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- Normal RA/RV dimension, normal pulmonary artery.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The emerging to mild increased LA dimension indicates the current and future risk of complications, secondary to MR, is mildly elevated yet overall, the heart appears stable without evidence of left-sided congestive criteria. Likewise, the lack of RA/RV and pulmonary artery enlargement are not consistent with congestive right heart failure. Possible mild pulmonary hypertension is not definitively excluded yet evidence of significant or clinical pulmonary hypertension is not present given lack of right cardiac chamber enlargement or hepatic congestion.

Overall, the respiratory signs in this patient appear non-cardiogenic in origin. Pimobendan 0.3 mg/kg BID is warranted given evidence of emerging to mild LA enlargement. No indication for additional cardiac medication. Primary lower airway disease is probable and respiratory support based on clinical impression of the patient combined with thoracic radiographs is indicated.

Cardiac prognosis is variable and sonographic monitoring is advised. Recheck echo is recommended in six months, sooner if clinically indicated or concern for possible emerging clinical pulmonary hypertension i.e. syncope, exercise intolerance, progressive respiratory signs, etc. If required, cardiac anesthetic risk is considered mild. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

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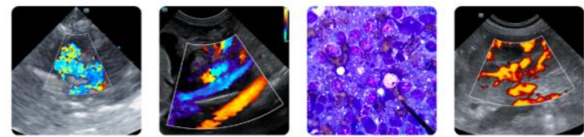

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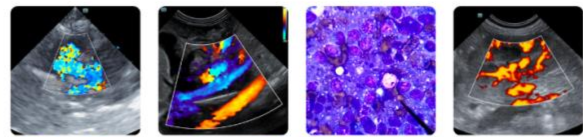

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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