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Clinical Sonography & Telecytology
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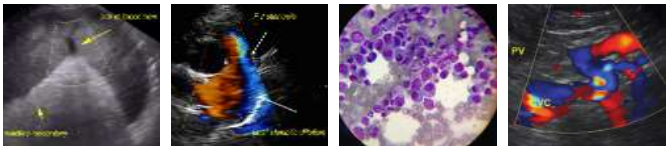

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Oscar Henschel

SPECIES

Canine

BREED

Chihuahua

SEX

MN

AGE

10 Years, 4 Months

WEIGHT

21.6 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Crook - SDEP Certified Clinical Sonographer

HOSPITAL NAME

Rivers Edge Pet Medical Center

REFERRING VET

Dr. David Gray

INVOICE

49372

DATE

1-7-22

PRESENTING CLINICAL SIGNS

Dental Disease - work up for anesthesia - Grade 1-2/6
Abnormal PE/Chem/CBC/UA Results: See attached radiographs - heart enlargement?

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	5.6	2.2	1.4	1.48	33.3	65.6	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	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	1.56	0.8		3.2	3.0	

Cardiac Presentation

The echocardiogram in this patient demonstrated mild enlarged **left atrial** size based on 3 different LA measurement methods. Very subtle deviation of intra-atrial septum towards the right atrium potentially indicative of mild elevated left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis without evidence of valvular prolapse or tendineae rupture. Doppler indicated measurable eccentric insufficiency. The **left ventricle** presented normal thicknesses and linear contour with mild 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, yet borderline decreased as evidenced by the fractional shortening measurement above and subjective evaluation of 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 thickening with 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). 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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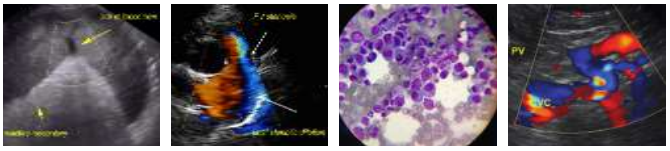

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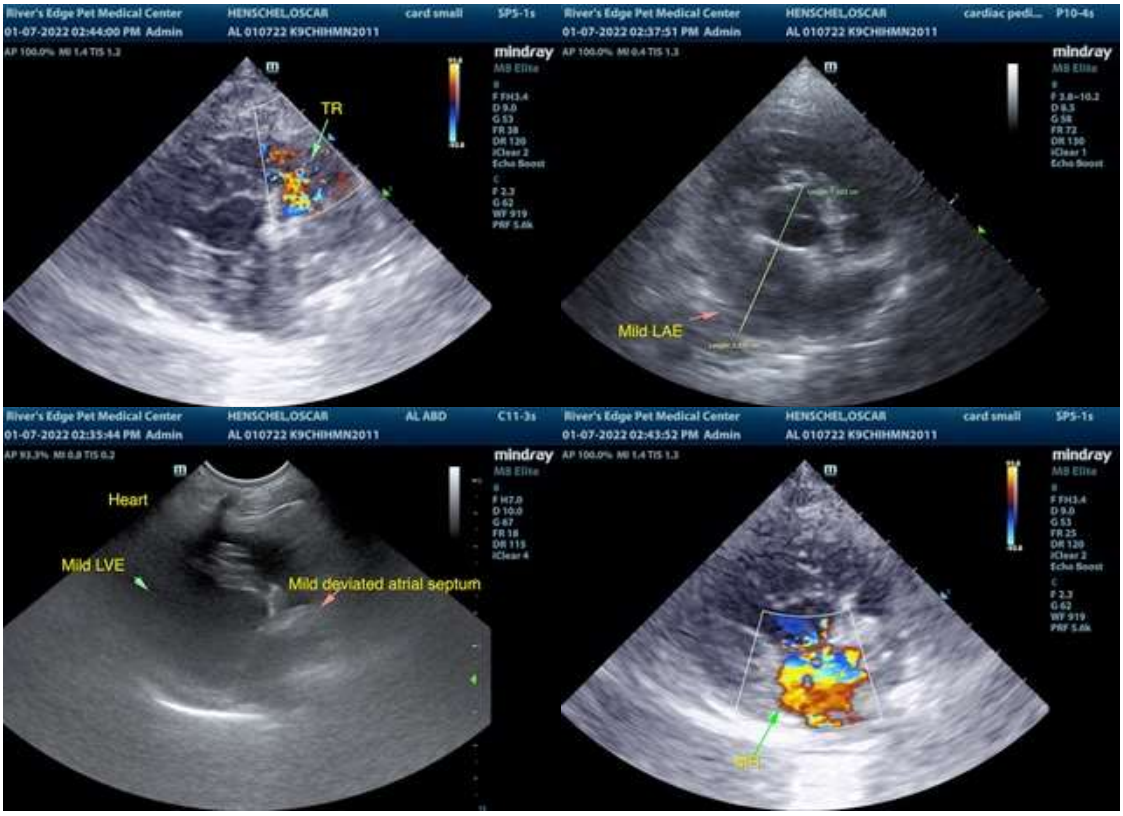
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM mild b2)
- Mild LV enlargement exhibiting decreased yet adequate contractility.
- TR - estimated pulmonary pressure gradient (approximately 20mmHg) not consistent with clinical pulmonary hypertension.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The mild LA/LV enlargement indicate that the risk for future complication is mildly elevated at this time, yet prognosis is highly variable. Likewise, the hemodynamic effects secondary to the mitral valve and tricuspid valve insufficiency appear to be relatively mild. Pimobendan 0.3mg/kg po bid warranted at this stage as this medication may help prolong cardiac changes associated with mitral valve insufficiency. No overt anesthetic contraindications; however, this patient may be at increased risk for fluid overload.

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. 3-4 days of Pimobendan therapy suggested prior to anesthesia. Recheck echocardiogram suggested in 6 months or sooner if clinical signs suggestive of left sided heart disease develop. Screening blood pressure prior to anesthesia advised.



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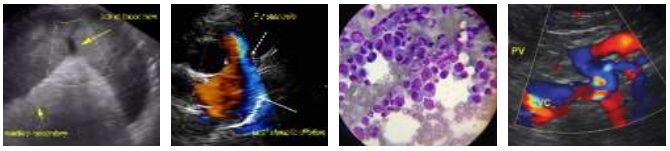

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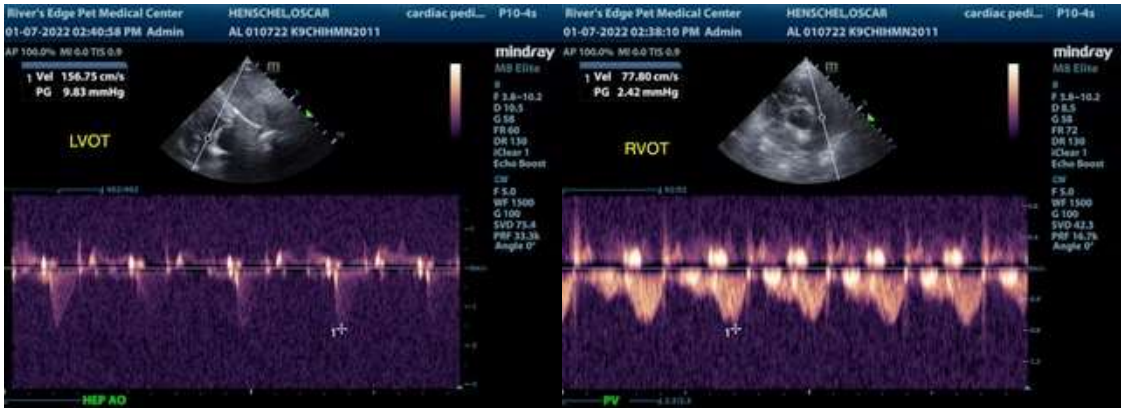

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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