SonoPath
Clinical Sonography & Telecytology
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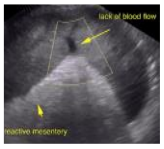
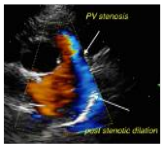
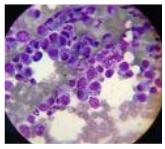
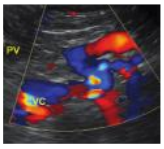

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Puck Plummer

SPECIES

Canine

BREED

Yorkie

SEX

Male Neutered

AGE

11 years

WEIGHT

7.3 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Meridithy Swart

HOSPITAL NAME

Swart Veterinary Imaging

REFERRING VET

Dr. Meridithy Swart

INVOICE

14223

DATE

7/6/22

PRESENTING CLINICAL SIGNS

Pre-operative echo prior to dental surgery. Patient has grade III murmur. On for following medications benazepril 5mg 1/2 tab q24 vetmedin 2.5 mg 1/2 bid, thyroxine 0.1 mg 1 tab bid, and galliprant- dose not given
Abnormal PE/Chem/CBC/UA Results: none reported

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	<1.3	28-40	40-100	<0.6
PATIENT				1.57	48	90	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	NM	1.6	1.0		2.6	2.65	

Cardiac Presentation

The echocardiogram in this patient demonstrated minor enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild vegetative thickening consistent with mild endocardiosis. No evidence of valvular prolapse. Doppler indicated eccentric 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. 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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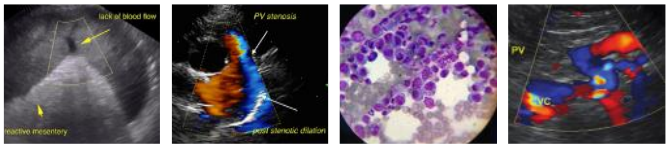

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ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1-early B2)

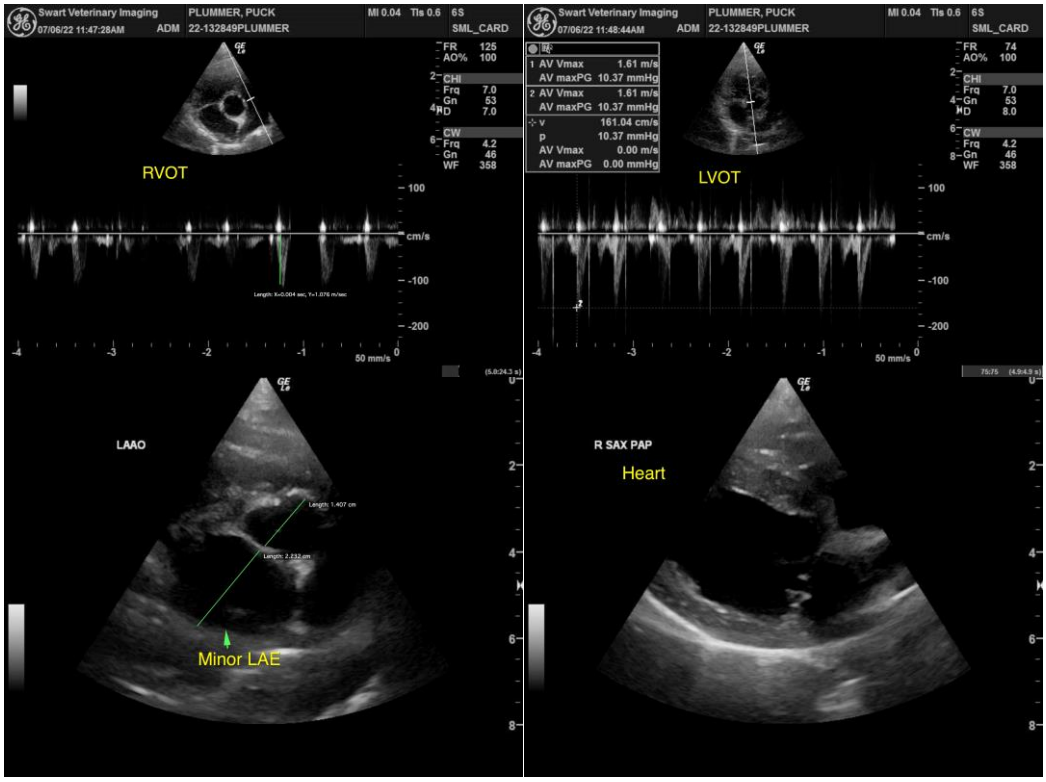
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This study is consistent with mild chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. No other clinical issues such as LV systolic dysfunction or overt evidence of clinical pulmonary hypertension were present.

The lack of significant LA enlargement indicates that the current and future risk of complications secondary to mitral valve insufficiency is relatively low. However, prognosis is highly variable at this stage and serial sonographic monitoring is required for further prognosis.

In a nonclinical patient without evidence of significant chamber enlargement, cardiac medications are not generally indicated. ACE inhibiter medication is suggested if BP >130 (not advised if BP <130). An argument can be made for continued Vetmedin as this medication may help prolong cardiac changes associated with mitral valve insufficiency. No anesthetic contraindications. The following anesthetic protocol is suggested. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs consistent with heart disease arise.

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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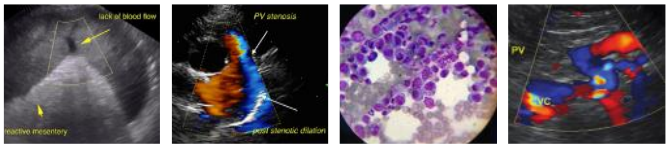

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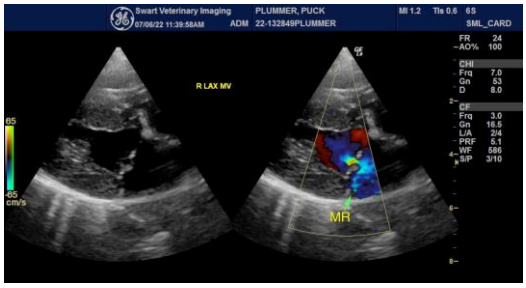

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com