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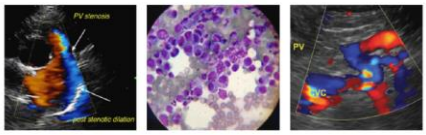
fredgromalak@gmail.com



SonoPath
Clinical Sonography & Telecytology
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PATIENT

Hachi Harris

SPECIES

Canine

BREED

Mixed

SEX

MN

AGE

6 years

WEIGHT

27.2 lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Badger Veterinary Hospital Dr Perkins

INVOICE

10584ag

DATE

05/12/2022

PRESENTING CLINICAL SIGNS

History: Patient has been coughing daily for the last several weeks. Owner would like to pursue a dental pending patient's cardiac status. Hyperadrenocorticism (o declines treatment)

Abnormal PE/Chem/CBC/UA Results: -Grade 3/6 left sided systolic murmur, history of grain free diet until 1 yr ago -Thoracic radiographs: VHS 12.8, generalized enlargement of cardiac silhouette with left atrial enlargement and dorsal displacement of trachea, patchy alveolar pattern in perihilar area. -Overweight -Dental disease -Anxiety (managed with fluoxetine)

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			2.3	2.3	49.1	80.5	0.37
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	156	1.2	0.75		4.7	4.65	

Cardiac Presentation

The echocardiogram for this patient presented excessive left atrial size expressed both in the LA/AO and LA max measurements Deviation of the intra atrial septum towards the right atrium is suggestive of increased left atrial pressure. The cranial and caudal mitral valve leaflets presented vegetative thickening consistent with endocardiosis without evidence of valvular prolapse or chordae tendinea rupture. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour with increased LV 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 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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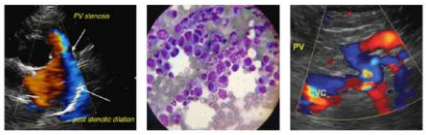

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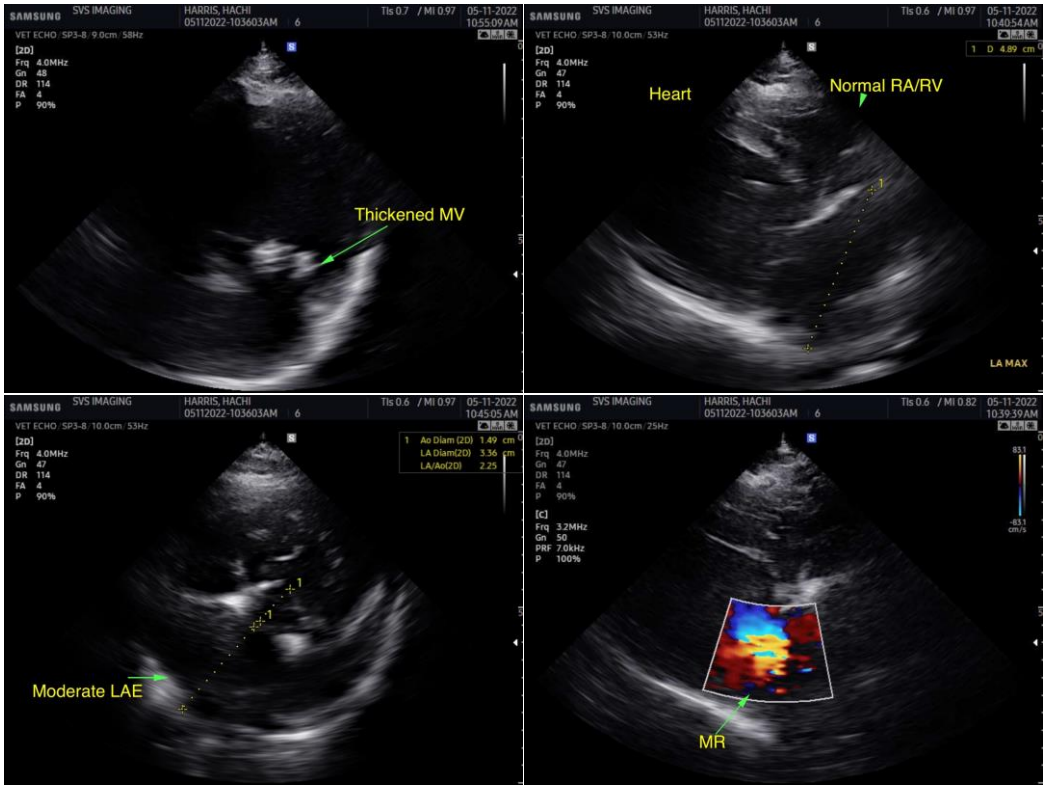
ULTRASONOGRAPHIC FINDINGS

- Thickened mitral valve with eccentric MR
- Moderate LA/LV enlargement with normal LV systolic function

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac presentation and cause of the murmur is most consistent with degenerative valvular changes with secondary eccentric mitral valve insufficiency. This is suggestive of early onset chronic degenerative mitral valve changes without evidence of DCM criteria. No other clinical issues such as clinical pulmonary hypertension were present. The moderate LA/LV enlargement indicate that the risk of complication is moderately elevated with the possibility of early cardiogenic pulmonary edema. Pimobendan 0.3 mg/kg PO BID +/- lowest effective dose of diuretic such as Lasix if strong clinical suspicion of early onset pulmonary edema would be reasonable. No overt evidence of cardiac neoplastic criteria. Serial sonographic monitoring is required for further prognosis. Recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease persist/progress. Anesthetic risk is considered moderately elevated yet not overtly contraindicated, the following protocol is suggested. Assessment of systemic BP prior to anesthesia is recommended.

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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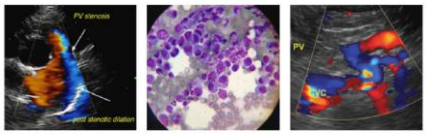

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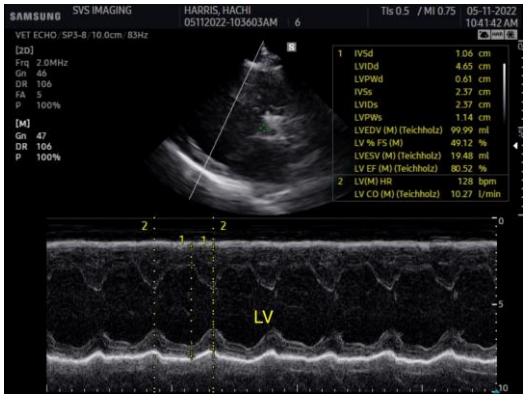

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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