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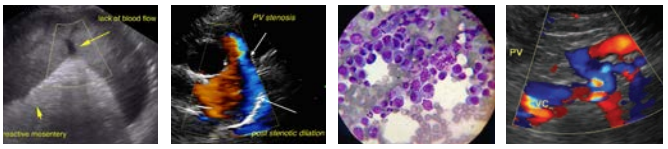

PATIENT
Steve White

SPECIES
Canine

BREED
Dachshund X

SEX
Neutered Male

AGE
9 Years

WEIGHT
22.6 Pounds

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

IMAGING PERFORMED BY
Dr. Gromalak

HOSPITAL NAME
SVS Imaging

REFERRING VET
Dr. McCaslin

INVOICE
24902

DATE
8/24/21

PRESENTING CLINICAL SIGNS

About 20% body mass loss since January. Nonspecific gastroenteritis diagnosed after exam on 8/6. CBC and serum chemistry values all wnl. Pockets of mild gas dilatation through small intestine of abdominal xray, all else unremarkable. Grade I-II sternal systolic murmur was noted without any other cardiovascular abnormalities on exam. Started on Metronidazole, low residue diet, probiotics, sucralfate. Also on apoquel for allergic dermatitis. Owner gave update 3 days later to say more comfortable, blood gone from stool, but diarrhea remains. Rechecked on 8/16. Diarrhea had never cleared but no blood while on meds. The day after ending antibiotic, blood returned, appetite decreased, vomited. On recheck, large rectal polyp found which can be exteriorized, abnormal palpation of deeper colon over prostate, feels mushy and bumpy. Murmur intensity now a Grade IV pansystolic with an irregular arrhythmia, mostly fast-fast-fast-slow-slow and repeat, but did vary. Recheck abdominal rad not much different from 8/6, solitary caudal loop of bowel does look subjectively too thick. Chest incidentally caught on xray shows nothing significant. CardioPet ProBNP = 418 pmol/L, within normal reference range.
Abnormal PE/Chem/CBC/UA Results: Are the GI symptoms connected with the rapid and marked cardiovascular changes or are these separate problems?

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			1.36	1.1	53.6	81.3	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	164	1.4	<1.0		3.2	3.2	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated subjective mild eccentric mitral valve 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).

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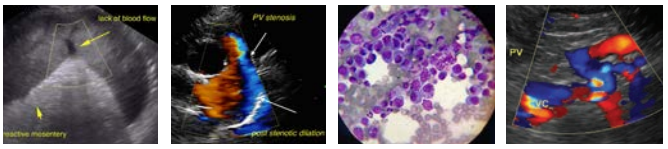

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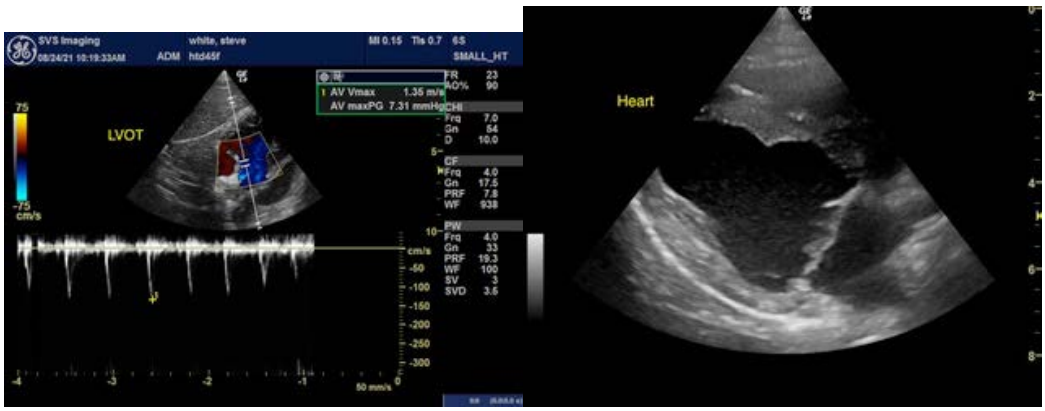
No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

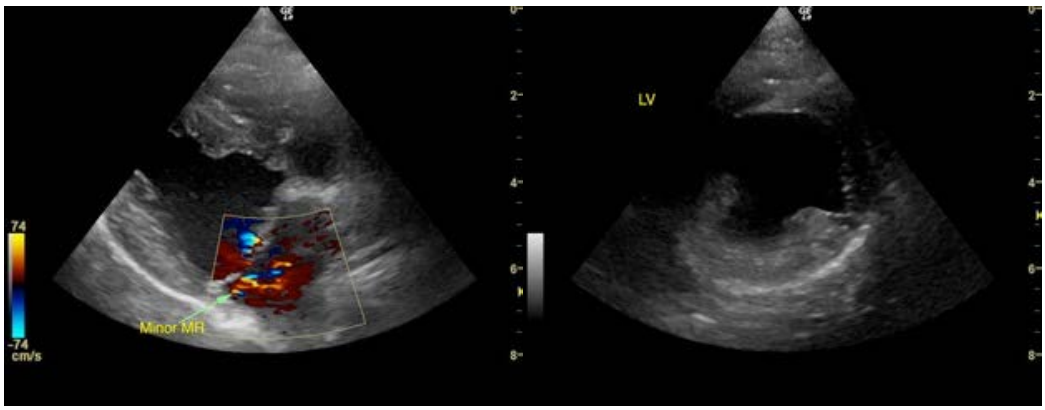
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1)
- Normal left atrium
- Overall normal cardiac structure and function (no overt arrhythmogenic disease)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is mild chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of left atrial enlargement indicates that the risk of future complication is low, although prognosis at this stage is highly variable. Although no evidence of arrhythmogenic disease was present in this study, potential for an arrhythmia such as ventricular premature contractions may potentially be secondary to gastrointestinal disease if present, although this assessment is not definitive. ECG assessment is recommended if persistent audible arrhythmia is noted. No indication for cardiac medications owing to mitral valve insufficiency indicated. No evidence of infiltrative cardiac disease or pericardial neoplasia. Recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease develop.





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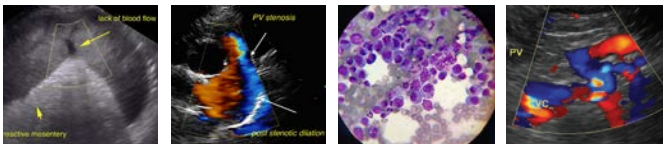

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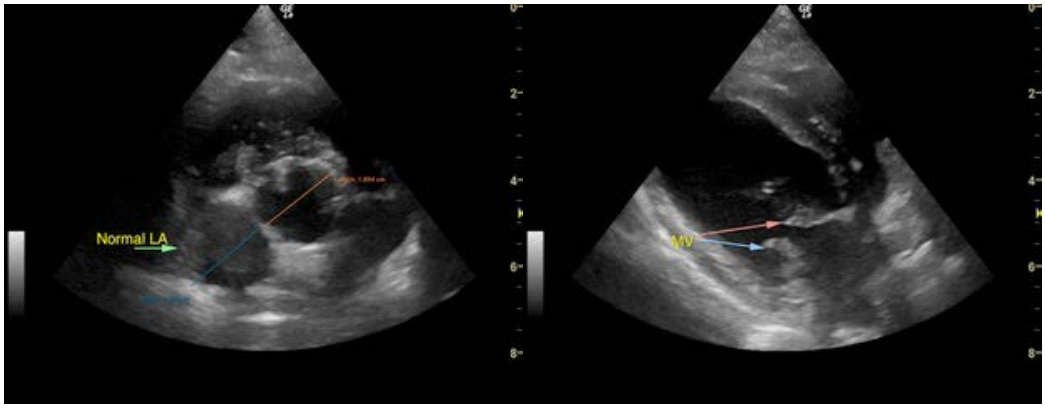

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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