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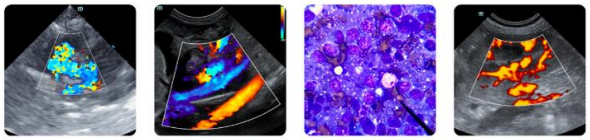


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath.com info@sonopath.com 1.800.838.4268

PATIENT
Stitch Tamasaukas

SPECIES
Canine

BREED
Lab Mix

SEX
Male Neutered

AGE
10.8 years

WEIGHT
70lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
Christensen, DVM

HOSPITAL NAME
Tranquility VC

REFERRING VET
Dr. House

INVOICE
47696

DATE
4/27/26

PRESENTING CLINICAL SIGNS

History: Ascites. PU/PD. New grade II/VI systolic murmur. Arrhythmia characterized as occasional dropped beats. Sedated with Torb, Midazolam and Propofol.
-Abnormal PE/Chem/CBC/UA Results: HCT 64%, Neuts 10.3 K/uL, Na 156, ALT 296, ALP 488, Ehrlichia and Anaplasma pos, otherwise CBC/Chem WNL. Albumin 3.3.
BP: 164mmHg

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

Normal cardiac silhouette. No obvious evidence of CHF.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

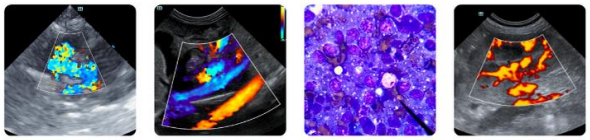
A single lead ECG is attached throughout the study. The estimated heart rate is 100bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. VPCs throughout; singles only. No supraventricular ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with respiratory variation. Isolated VPCs.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Trace/mild eccentric mitral regurgitation with no left atrial dilation (LA:Ao <1.4). Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with no significant tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

CARDIAC CHART

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	NM	NA	1.4	1.3	37	70	0.4
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	1.2	1.2	31.8	2.3	3.8	2.4
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)



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*Note: All measurements based upon multi-modal images and methods. An average value is reported. Adapted from June Boon, Veterinary Echocardiography, 1998 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 Hansson et al, Vet Rad and Ultrasound 2002	20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
	25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
	30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
	40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing trace/mild mitral regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study. No obvious intra or extra-cardiac masses are visualized; however, it is important to note that the latter are easily missed in the absence of active effusion. Image acuity is lacking in this image set, and these remain a possibility.

Given these findings, ascites is unlikely to be cardiogenic in origin. Further workup through chest radiographs, AUS, etc. should certainly be pursued. An arrythmia is noted in the history and an ECG read is recommended.

Ventricular premature contractions (VPCs) are noted on the ECG during the study. VPCs are generated from abnormal conductive or fibrotic tissue in the ventricles of the heart muscle, and even frequent single VPCs will often cause no clinical signs in dogs. When sustained however, ventricular tachycardia can lead to symptoms such as lethargy, collapse and sudden death. VPCs are a very non-specific finding. They can be due to significant cardiac disease (mild in this study) or be extra-cardiac in origin, i.e., due to pain, stress, inflammation, cancer, GI disease, DIC/sepsis, etc. In this senior dog with ascites, all differentials should be ruled out. there is always an elevated risk for collapse and sudden death in any arrhythmic patient, and even on medications this risk unfortunately still persists.

Based strictly upon the amount of arrhythmia present on the available ECG, anti-arrhythmic therapy is not clearly indicated. Pending results of systemic work up, can consider a holter monitor especially if any significant lethargy or collapse is noted. The patient has episodes of weakness; however, these are unlikely to be related. Further workup may be indicated.

Fish oil supplementation is recommended for dogs with arrhythmias (500-1000mg of omega 3 and 6 once to twice daily).

No cardiac medications are clearly indicated, as no benefit has been shown to providing therapy for dogs in stage B1. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

Assessment of progression in the future will help predict long term prognosis, which is highly variable with stage B1 disease. Many B1 dogs will remain asymptomatic with slow progression for years to come.

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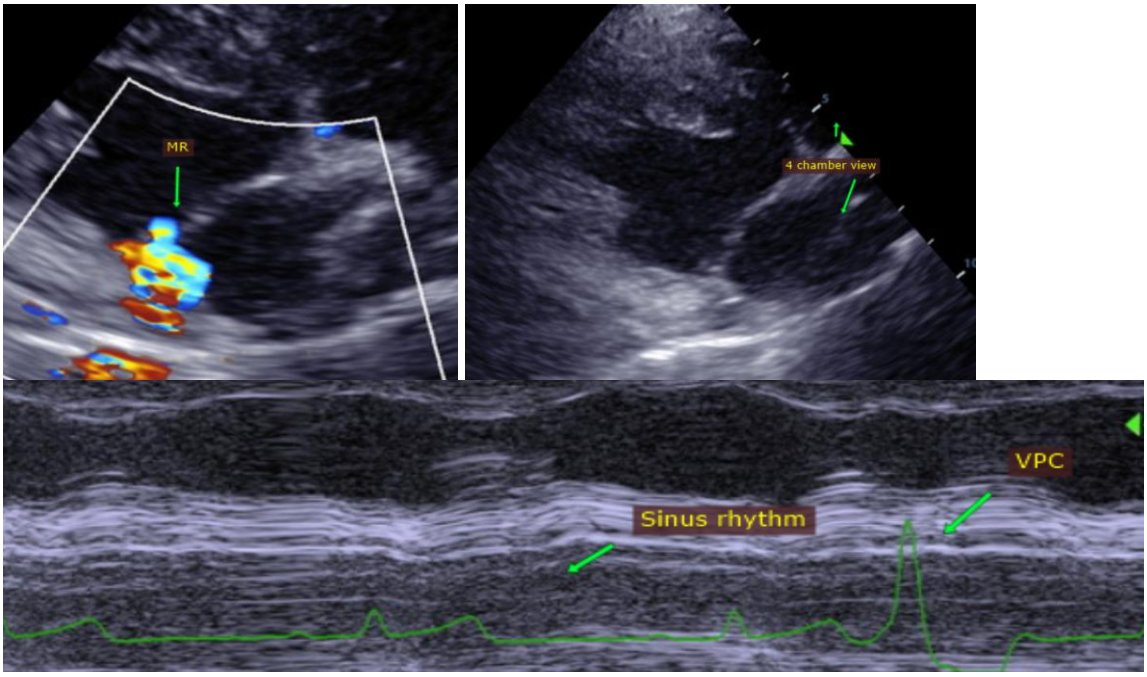
Anesthetic risk is considered moderately elevated. Avoid ketamine, telazol, Dexdomitor (or other alpha-2 agonists) and acepromazine. Recommend having lidocaine CRI available for use in the event of worsening ventricular arrhythmias under anesthesia (CRI 50—75mcg/kg/min).
PLAN:
Consider further work up through labs, holter monitor and/or abdominal ultrasound, etc.

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months to assess rate of progression, sooner if any development of clinical signs in the interim.

IMAGES



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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
info@sonopath.com