



PATIENT

Milton Ferreira

SPECIES

Canine

BREED

Shih Tzu

SEX

Male Neutered

AGE

13 years

WEIGHT

23.1lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM
DACVIM (Cardiology)

IMAGING PERFORMED BY

Pamela Harrigan,
RDCS

HOSPITAL NAME

Angell Animal
Medical Center

REFERRING VET

Dr. Kim

INVOICE

26191

DATE

9/3/22

PRESENTING CLINICAL SIGNS

History: Presented to ER after collapse lateral/unresponsive. T-FAST - moderate pericardial effusion. Tap = 5-10 ml (clotted) hemorrhagic effusion. V-tach, short run post tap - bolus lidocaine, resolved. TXR- unstructured interstitial pattern.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.

Left ventricle: The LV diameter is normal with adequate myocardial function. LV wall thicknesses are normal.

Left atrium: The left atrium is normal.

Mitral valve: The mitral valve is mildly thickened with mild to moderate eccentric MR. Normal velocity.

Aortic valve/Aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

Right ventricle: Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

Right atrium: Normal RA dimension. Mass associated with the right AV groove. The mass is heterogenous in appearance; 1.6 x 1.1cm in best viewed cross section. No obvious tamponade.

Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Normal velocity.

Pulmonic valve/Pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

Pericardium/other: Scant pericardial and no pleural effusion noted.

Heart rhythm: ECG reveals a sinus rhythm with an average HR of 120bpm.

2-Dimensional Measurements

Ao diam (cm)	1.6
LA diam (cm)	1.96
LA:Ao (Swe)	1.2
IVS thickness (cm)	0.8
LVID diastole (cm)	2.5
PW thickness (cm)	0.8
LVID systole (cm)	1.4
FS (%)	44

Doppler Measurements

PV Vmax (m/s)	0.5
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	5.6
TR Vmax (m/s)	2.6
TR PG (mmHg)	2.7

INTERPRETATION OF THE FINDINGS

Cardiac neoplasia associated with the right heart/AV groove. The most likely tumor type given this appearance and location is a hemangiosarcoma (HSA), although this is an atypical breed and other possibilities cannot be definitely ruled out. Advanced thoracic imaging such as a CT scan may be beneficial to further analyze the location and the extent of the mass. There is also mild chronic degenerative valve disease with mitral and tricuspid regurgitation. These appear well compensated for without cardiac remodeling at this time. No additional issues are identified.



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The prognosis with cardiac hemangiosarcoma is poor, with an MST of only 2-3 months. The emergent limiting factor is often recurrent hemorrhage, and a pericardial window or subtotal pericardiectomy may relieve clinical signs. In this case, there is no significant re-efusion at this time; however, the risk for development in the future is high. HSA also has a high metastatic rate, and full systemic screening is recommended for metastatic lesions. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage and development of tamponade, malignant arrhythmias/sudden death in the future.

At this time, no cardiac medications are clearly indicated. Over the counter herbal supplement Yunnan Baiyao may help decrease risk of bleeding; however, true benefit is speculative.

Ventricular tachycardia was noted at the time of presentation. While no arrhythmias are seen here, there is certainly risk for recurrence and sudden death in the future. Consider a holter monitor, particularly if any clinical signs develop at home.

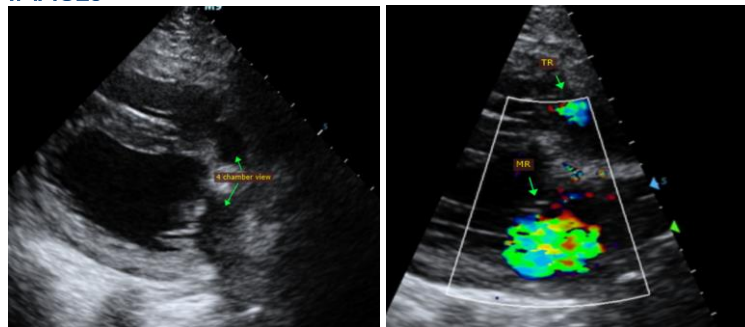
RECOMMENDATIONS

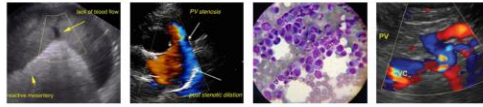
- Recommend OTC Yunnan Baiyao 1 capsule PO BID.
- Recommend a holter monitor and/or further ECG evaluation.
- No cardiac medications are clearly indicated.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Consider advanced imaging such as thoracic CT, full systemic screening (CXR, labs, AUS) to assess for metastatic lesions.
- Chemotherapy and/or radiation can also be discussed with an Oncologist and may extend average survival time.
- Monitor for syncopal episodes, acute lethargy, development of a cough, labored breathing, exercise intolerance or vomiting.

PLAN

- Reassess tumor dimension in 2-3 months, sooner if recurrence of clinical signs.

IMAGES





PATIENT

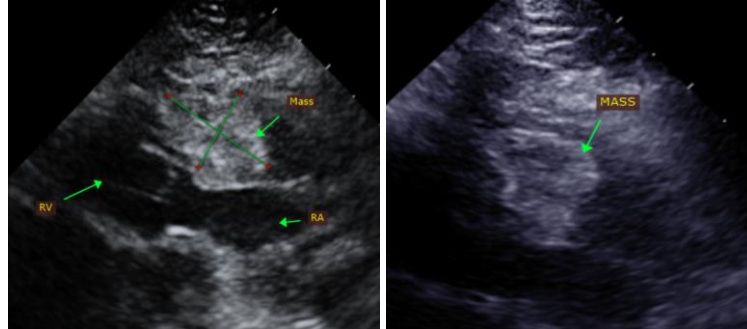
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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Maggie Machen Lamy, DVM
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 info@sonopath.com

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