



PATIENT

Charlie Dahlgren

SPECIES

Canine

BREED

Bull Mastiff

SEX

Female Spayed

AGE

8 years

WEIGHT

93.7lbs

PRESENTING CLINICAL SIGNS

History: Patient presented to emergency clinic on 4/31/22 after becoming suddenly lethargic. Pericardial effusion was identified and 50cc were removed. CBC/Chem wnl with exception of mild ALT elevation (197). PT/PTT mildly elevated. Medications: heartworm and flea/tick prevention. -CXR report: Scant pleural effusion, otherwise NSF.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 10mm/mV. The average heart rate is 80bpm (range 66-94bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Homogeneous hypoechoic mass associated with the right AV groove and right atrial free wall; 2.2cm x 4.3cm in best viewed cross section. The mass can be seen mildly occluding flow through the right atrium; however, an intra versus extra-chamber origin cannot be definitively identified, and either is possible. Trivial mitral regurgitation with mild mitral valve thickening. Normal MR velocity. Trace TR. Normal TR velocity. The LV dimension and function are adequate for this breed. Left atrium is normal in diameter. The pulmonic and aortic valves are normal in appearance. Normal outflow velocities. No pericardial effusion. Scant pleural effusion.

CARDIAC CHART

INTERPRETED BY

Maggie Machen Lamy,
 DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Loetitia St-Jacques,
 LVT/RVT

HOSPITAL NAME

NP

REFERRING VET

Dr. Dahlgren

INVOICE

23972

DATE

5/2/22

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	5.0	2.4	NM	1.4	26	51	0.7
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	0.92	42.5	3.6	4.3	3.2
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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)
				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)

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
 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Cardiac neoplasia associated with the right atrium/AV groove. Whether the tumor is compressing the right atrium from a purely extra-cardiac origin or is infiltrating the chamber cannot be identified nor does it make a significant difference in this case. The most likely tumor type given this location is a hemangiosarcoma (HSA) with other possibilities much less likely.

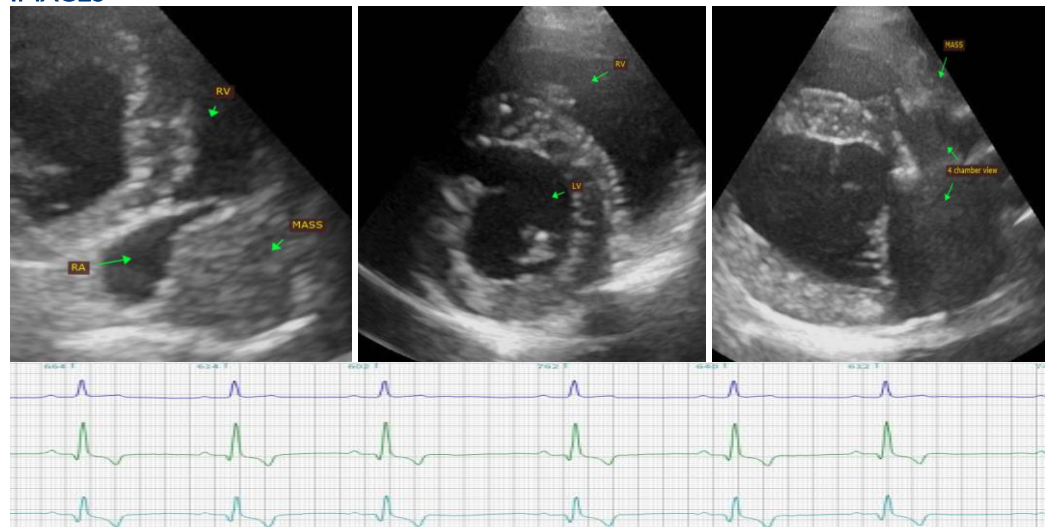
Pericardiocentesis was performed to relieve acute symptoms, and there is no obvious rebleeding seen here. This can happen at any time and the owner should be warned of this possibility. No other significant issues are identified at this time.

The ECG is unremarkable with a respiratory sinus arrhythmia. These cases are at high risk for malignant arrhythmias, even without obvious evidence here and monitoring for signs at home is advised.

The prognosis with cardiac hemangiosarcoma is poor, with an MST of <3 months. The emergent limiting factor is often recurrent hemorrhage, and a pericardial window or subtotal pericardiectomy may relieve recurrent clinical signs though is rarely recommended. Chemotherapy and/or RT can also be discussed with an Oncologist and may extend average survival time to 4-6 months. HSA also has a high metastatic rate, and chest radiographs/full systemic work up are recommended to assess for metastasis. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage, development of tamponade and malignant arrhythmias/sudden death in the future.

No cardiac medications are clearly indicated at this time. Over the counter herbal supplement Yunnan Baiyao may help decrease risk of bleeding, however true benefit is speculative (1 capsule PO BID). A recheck of tumor dimension and fluid accumulation can be considered in 1-2 months if patient does well, sooner if recurrence of clinical signs.

IMAGES





Portable Animal Western Sonography, Inc.

IMAGING PERFORMED BY

pawsonography@gmail.com  530-786-8340

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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.

SPECIES

Canine

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.

BREED

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Maggie Machen Lamy, DVM
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