

**PATIENT**

Chowder Tilley

PRESENTING CLINICAL SIGNS

History: Acute onset of lethargy and anorexia. FAST Scan - abdominal effusion and pericardial effusion found. Pericardiocentesis performed post echo and revealed hemorrhagic effusion.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Moderate volume pericardial effusion with early collapse of the right atrial wall consistent and cardiac tamponade. Suspicious hypoechoic tip of the right atrial appendage (see below). The AV groove is hyperechoic yet round in appearance. No obvious mitral or tricuspid regurgitation. LV function is borderline. The Left atrium is normal in diameter. The pulmonic and aortic valves are normal in appearance. Normal outflow velocities; laminar flow.

BREED

Goldendoodle

CARDIAC CHART**SEX**

Male Neutered

AGE

5.3 years

WEIGHT

55.4lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Passinault

INVOICE

27772

DATE

12/1/22

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			NM	1.0	29	50	0.5
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	180	0.7	1.6	25.1	2.4	3.5	2.5
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the clinical signs is cardiac tamponade due to pericardial effusion secondary to suspect cardiac neoplasia associated with the right heart. Tamponade is leading to caval congestion and effusion. The tip of the AV groove is suspicious (see below); however, it is difficult to be definitive on 2D ultrasound with this type of mass. That being said, suspicion for a small tumor is high. Advanced imaging such as a thoracic CT scan should be considered.

The most likely tumor type given this location is a hemangiosarcoma (HSA); however, other tumor types are possible but less likely, including chemodectoma or ectopic parathyroid tumor. Regardless the patient was in cardiac tamponade secondary to hemorrhage causing volume depletion, hepatic congestion and a drop in cardiac output. Emergency pericardiocentesis was

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warranted and performed. Finally, an intermittent arrhythmia is suspected throughout the study and an ECG is strongly recommended.

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Assuming the suspicion is confirmed, 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 pericardectomy may relieve clinical signs. HSA also has a high metastatic rate, and **full systemic screening is recommended for metastatic lesions** that may be samples. Chemotherapy and/or radiation can also be discussed with an Oncologist and may extend average survival time. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage and development of tamponade, malignant arrhythmias/sudden death in the future.

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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).

SEX

Male Neutered

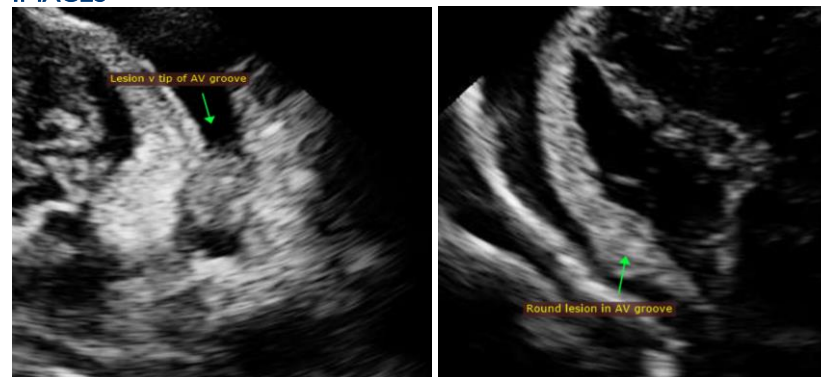
Once symptoms are relieved via pericardiocentesis, a recheck of tumor dimension and fluid status can be considered in 1-2 months, sooner if recurrence of clinical signs.

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IMAGES**WEIGHT**

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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.

HOSPITAL NAME

SVS Imaging CT

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.

REFERRING VET

Dr. Passinault

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