



PATIENT

Sancho Canetti

SPECIES

Canine

BREED

Golden Retriever

SEX

Male Neutered

AGE

13 years

WEIGHT

63lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

G. Ferrer, DVM

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Carrasquillo

INVOICE

26084

DATE

8/29/22

PRESENTING CLINICAL SIGNS

History: Presented to further evaluation after being diagnosed with pericardial effusion (8/28/22). Pericardiocentesis was done and 28mls serosanguinous fluid were removed. Received Furosemide 40mg: 1.5 tablet BID, Ciprofloxacin 15mg/kg PO BID, Famotidine 1mg/kg PO BID. Culture insensitivity pending.

Muffled heart sounds. Grade 3/6 heart murmur. Respiratory distress, abdominal effort.
-Abnormal PE/Chem/CBC/UA Results: Elevate ALT.
-Radiographs: Globoid heart shape, mild pleural effusion. .

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. Mild anterior-directed mitral regurgitation with a mild left atrial enlargement. No LV dilation with mildly depressed myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. An atypical soft tissue lesion is seen that appears associated with the septal leaflet of the tricuspid valve (1.4 x 1.4cm in best viewed cross section). The lesion appears tethered, yet freely moveable on the ventricular side of the leaflets. A stalk cannot be visualized. Normal TR velocity. Mild RA/RV enlargement. The pulmonic and aortic valves are normal in morphology and mobility. Normal aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion. No extra-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	4.9	2.3	NM	1.4	22	40	0.47
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	50	1.2	0.6	28.6	2.7	4.5	3.5
*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

Unusual case with several abnormal findings. First, there is early chronic degenerative valve disease present with mild mitral and tricuspid regurgitation. Mild left atrial enlargement suggest



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the risk for left-sided complication is low. Additionally, the systolic function is mildly depressed, which may be secondary to valve disease in a large breed dog; however, screening for contributing issues is recommended such as hypothyroidism or an atypical diet. Third, there is historical non-hemorrhagic pericardial effusion with no recurrence on this exam. Finally, a soft tissue lesion is seen associated with the ventricular side of the tricuspid valve leaflet. A neoplastic lesion is suspected, although cannot be confirmed. No obvious extra-cardiac tumors are identified; however, it is important to note that small masses are easily missed, and a thoracic CT scan or MRI would be necessary to fully evaluate the surface of the heart. Without hemorrhagic effusion however, this is of low suspicion.

Given these findings, no clear cause of the prior effusion is identified. It is quite unusual to see a non-hemorrhagic effusion, and neoplasia still remains the top differential (such as LSA/infiltrative). Other possibilities include infectious, atypical idiopathic, hypoproteinemia, other. The finding of a potential intra-cardiac mass is certainly concerning; however, how this particular lesion would lead to right-sided congestion is unclear.

The next step in this case, assuming the culture/sensitivity is inconclusive, would be further imaging including an abdominal ultrasound and potentially thoracic CT scan. Additionally, full lab work is highly recommended if not already performed. Given the highly unusual nature of this case, referral to a multispecialty center should also be considered.

It is reasonable to continue low dose Lasix therapy as below, in addition to Pimobendan and simply screen for recurrency of clinical issues going forward. It is worth noting that a frequent arrhythmia is noted throughout the study (premature beats), and **a screening ECG is strongly recommended.**

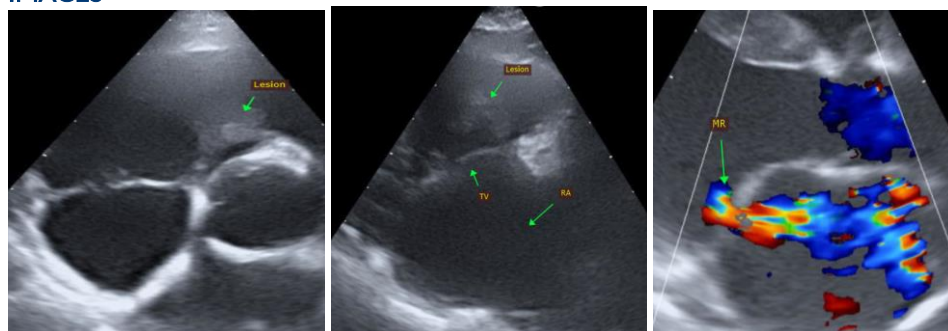
Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

PLAN

Consider referral as discussed for advanced imaging and evaluation. Pending culture results, full systemic evaluation (AUS, thoracic CT, labs) recommended. Continue Lasix 1mg/kg PO q12h. Institute Pimobendan 0.3mg/kg PO q12h. Baseline ECG is recommended.

If patient does well at home, simple reassessment in 3-4 months is recommended, sooner if any recurrence of pericardial effusion.

IMAGES





PATIENT

Sancho Canetti

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
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)
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