



PATIENT

Tapper Heinen

SPECIES

Canine

BREED

Labrador Retriever

SEX

Male Neutered

AGE

11 years

WEIGHT

83.0lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Khatter

INVOICE

24406

DATE

5/25/22

PRESENTING CLINICAL SIGNS

History: Heart murmur noted as a pup. Echo was advised in 2021 along with vetmedin heart medication. Never received echo. Recently coughing noticed in AM hours and when on walks. Grade 3-4/6 left side heart murmur noted on recent exam Owner decided on echo before starting heart medications.

-Abnormal PE/Chem/CBC/UA Results: History of elevated ProBNP 1138 more recent ProBNP 1649.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The mitral valve is thickened without significant prolapse into the left atrial lumen. A ruptured chordae tendineae is visualized. There is severe mitral regurgitation present. There is moderate to severe left atrial enlargement with a horizontal component. There is moderate left ventricular dilation. Left ventricular systolic function is adequate. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. No AI. Trivial PI. The main pulmonary artery is normal in size. Normal right atrial and right ventricular dimensions. The tricuspid valve is mildly thickened with trivial tricuspid regurgitation. Normal velocity. No pericardial/pleural effusion or cardiac masses are seen.

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	6.6	2.2	1.8	1.8	35	70	1.1
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	100	0.94	0.6	37.6	5.1	6.0	3.9
*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 murmur is chronic degenerative valve disease causing severe mitral and trivial tricuspid regurgitation. Severe left atrial and ventricular enlargement confers an elevated risk for spontaneous congestive heart failure. The finding of a ruptured chordae tendineae dramatically raises this risk. No additional issues such as pulmonary hypertension or systolic dysfunction are identified.

**PATIENT**

Tapper Heinen

A cough in a patient with this degree of heart disease is likely multifactorial in origin with concern for CHF. Chest radiographs are strongly recommended; however, full cardiac support is recommended as below. If the cough persists despite institution of diuretic therapy, hydrocodone may be indicated for a mechanical component.

SPECIES

Canine

Long term prognosis is guarded to poor; however, most patients are able to do well on medications for some time (average 8-12 months) once in CHF. A chordal rupture does not necessarily change prognosis, assuming the patient is able to be stabilized through the initial event. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Monitoring of sleeping breathing rates is recommended as the best way to screen for recurrent CHF at home.

BREED

Labrador Retriever

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes. Elective anesthesia is not advised.

SEX

Male Neutered

PLAN

Recommend CXR as discussed. Administer Lasix/furosemide 1-2 mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Administer Pimobendan 0.3mg/kg PO q12h.

AGE

11 years

A renal panel and BP are recommended in 10-14 days following the above medication changes, then every 3-4 months lifelong on diuretics. If doing well and BP is >130mmHg, consider ACE-I 0.5mg/kg PO q12h. If cough persists and RR is normal, consider addition of hydrocodone with homatropine if needed for QOL (0.2-0.4mg/kg up to q4-6h PRN).

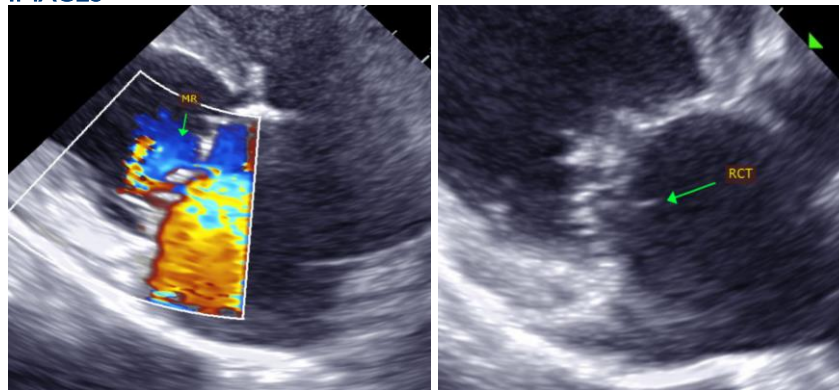
WEIGHT

83.0lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

IMAGES**IMAGING PERFORMED BY**

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Khatter

INVOICE

24406

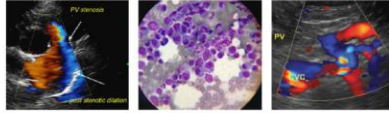
The information and recommendations provided are based on the images presented by the referring

DATE

5/25/22

IMAGING PERFORMED BY

svsmobileimaging.com 309-737-3070



Clinical Sonography & Telemetry

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Tapper Heinen

veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

SPECIES

Canine

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

BREED

Labrador Retriever

SEX

Male Neutered

AGE

11 years

WEIGHT

83.0lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Khatter

INVOICE

24406

DATE

5/25/22