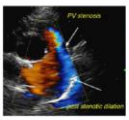
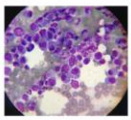
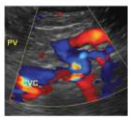
IMAGING PERFORMED BY
svsmobileimaging.com 309 - 737 - 3070

SVS IMAGING

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Benjamin Clemence

SPECIES

Canine

BREED

Coton de Tulear

SEX

Male Neutered

AGE

13.6 years

WEIGHT

13.2lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Wiegel

INVOICE

27305

DATE

11/7/22

PRESENTING CLINICAL SIGNS

History: Grade 5/6 heart murmur. Increased coughing. patient did not tolerate doxycycline (GI signs), cough did improve with carprofen.
-Current medications: 12.5mg Carprofen BID, Furosemide 12.5mg BID, Enalapril 2.5mg BID, Vetmedin 2.5mg BID. increases in Furosemide result in significant PU/PD that owner does not tolerate.
-Abnormal PE/Chem/CBC/UA Results: CBC/Chem/UA/T4 8/16/22 WN.
-Radiographs: Minimal tracheal collapse, increased heart sized vs 1 year ago esp of L ventricle, VHS 12.0, edema caudodorsal to the heart.

ECHOCARDIOGRAM FINDINGS

2D, m-mode and Doppler imaging are available. Diffuse thickening of mitral valve leaflets (anterior> posterior) with prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with severe left atrial dilation. Significant LV dilation with hyperdynamic myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. Normal right heart. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No pulmonic or aortic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

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	5.5	NA	NM	2.5	45	86	0.15
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	190	0.8	1.2	6.0	3.0	3.3	1.8
*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)
**Note: All measurements based upon multi-modal images and methods. An average value is reported.*				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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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 regurgitation. Severe left atrial enlargement indicates the risk for spontaneous congestive heart failure is elevated. No additional issues such as systolic dysfunction are identified.

PATIENT

Benjamin Clemence

SPECIES

Canine

BREED

Coton de Tulear

SEX

Male Neutered

AGE

13.6 years

WEIGHT

13.2lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Wiegel

INVOICE

27305

DATE

11/7/22

The described cough is likely multi-factorial in origin, including a mechanical component due to cardiomegaly, possible concurrent airway disease and/or early or recurrent CHF given the severity of disease. Reportedly the patient had CHF previously, which is supported by this study. Lasix should be continued; however, a mechanical cough is suspected given the description. Consider change to Hydrocodone for less potential negative side effects compared to Carprofen, with no further increase in Lasix warranted at this time.

Monitoring of sleeping breathing rates in the future will be paramount to determine the origin of any future cough. The average survival of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Monitoring of renal values is recommended lifelong.

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.

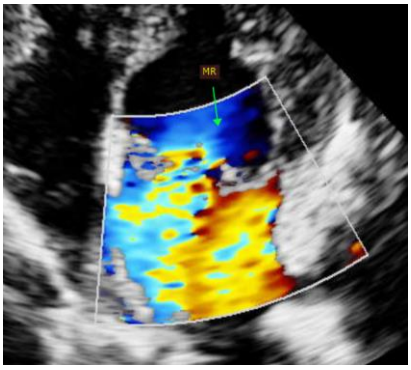
PLAN

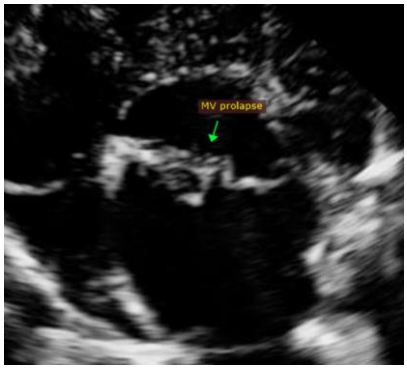
Screening BP is recommended. Continue Pimobendan 0.3mg/kg PO q12h. Continue Lasix as prescribed. Administer Spironolactone 1-2mg/kg PO q12h. Consider change to Hydrocodone in lieu of Carprofen: (0.2-0.4mg/kg PO up to q4-6 hours PRN). Continue ACE-I 0.5mg/kg PO q12h.

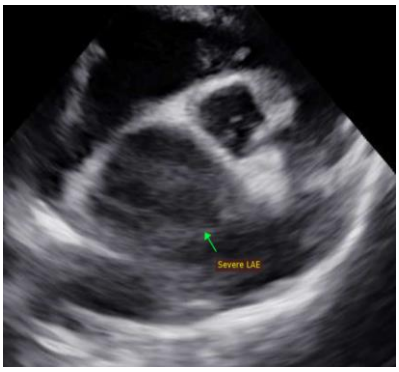
A renal panel and BP are recommended every 3-4 months on diuretics to ensure tolerance of medications.

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

IMAGES





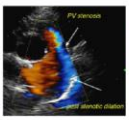
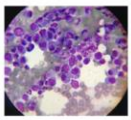
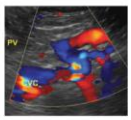


The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

IMAGING PERFORMED BY
svsmobileimaging.com 309 - 737 - 3070

SVS IMAGING

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT

Benjamin Clemence

SPECIES

Canine

BREED

Coton de Tulear

SEX

Male Neutered

AGE

13.6 years

WEIGHT

13.2lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Tom McNeill

HOSPITAL NAME

SVS Imaging CT

REFERRING VET

Dr. Wiegel

INVOICE

27305

DATE

11/7/22

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