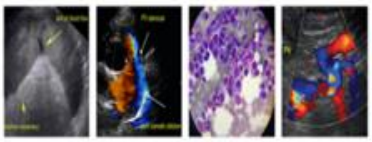
Mass Veterinary Services



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

PATIENT
Sammy Keating

SPECIES
Canine

BREED
Coton de Tulear

SEX
Male Neutered

AGE
9 years

WEIGHT
16lbs

INTERPRETED BY
Maggie Machen Lamy, DVM DACVIM (Cardiology)

IMAGING PERFORMED BY
Pamela Harrigan, RDCS

HOSPITAL NAME
Mass Veterinary Services

REFERRING VET
Dr. Masloski

INVOICE
24478

DATE
5/31/22

PRESENTING CLINICAL SIGNS

History: Sammy was noted to have a heart murmur in April when he was seen for a cough. Radiographs revealed cardiomegaly. Started on Pimobendan. His cough presently waxes and wanes - seems worse after playing. Resting respiratory rate has been normal. Eating well with normal activity. Has been on a grain free diet that was changed in April. On exam today: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear. BP: 110 mmHg x 5. Current medications: Pimobendan/vetmedin 3.75mg 1 tab twice a day.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
Left ventricle: LV dilation with hyperdynamic myocardial function. LV wall thicknesses are normal.
Left atrium: The left atrium is severely dilated.
Mitral valve: The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. Lack of coaptation in systole. Severe eccentric mitral regurgitation with a normal velocity.
Aortic valve/aorta: The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.
Right ventricle: Mild right ventricular dilation.
Right atrium: Mild RA dilation
Tricuspid valve: The tricuspid valve appears mildly thickened with mild tricuspid regurgitation; velocity consistent with moderate pulmonary hypertension.
Pulmonic valve/pulmonary artery: The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.
Pericardium/other: No pericardial or pleural effusion noted. No obvious cardiac masses.
Heart rhythm: ECG reveals a sinus rhythm with an average HR of 160bpm.

2-Dimensional Measurements

Ao diam (cm)	1.4
LA diam (cm)	3.8
LA:Ao (Swe)	2.7
IVS thickness (cm)	0.6
LVID diastole (cm)	4.7
PW thickness (cm)	0.6
LVID systole (cm)	2.5
FS (%)	47

Doppler Measurements

PV Vmax (m/s)	0.77
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	5.9
TR Vmax (m/s)	4.0
TR PG (mmHg)	64

INTERPRETATION OF THE FINDINGS

The murmur is due to chronic degenerative valve disease causing severe mitral and mild tricuspid regurgitation. Significant left atrial and ventricular enlargement indicate the risk for spontaneous congestive heart failure is elevated. Moderate pulmonary hypertension is noted, which is likely secondary to a reported cough and elevated LA pressure. No obvious additional issues are noted.

A cough in this patient with severe heart disease is likely multi-factorial in origin, including mainstem bronchi compression and/or potentially some degree of upper or lower airway disease. Early CHF/pulmonary edema should also be considered; however, this is less likely based upon the reported chronic cough history and lack of edema on chest radiographs. Recommend institute cardiac supportive medications including a weak diuretic (spironolactone) and advise close monitoring at home for need for Lasix therapy. An ACE-I should be avoided due to reported hypotension. Pending response, cough suppression (up to q4-6 hours) may also be helpful for mechanical cough.

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Long term prognosis is guarded to poor, with an average survival time of 8-9mo for canine patients with active pulmonary edema 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.

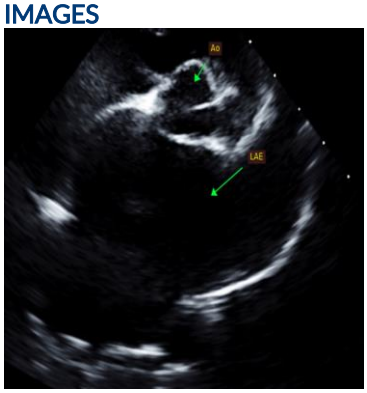
RECOMMENDATIONS

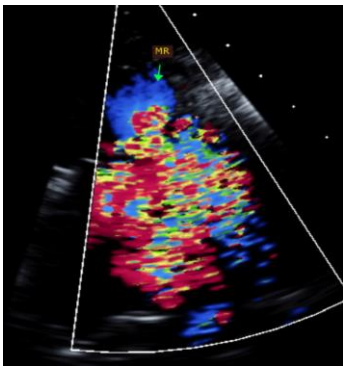
- Administer Pimobendan 0.3mg/kg PO q12h.
- Institute Spironolactone 1-2mg/kg PO q12h.
- Consider hydrocodone with homatropine for QOL (0.2-0.4mg/kg PO up to q4-6 hours PRN for cough; available in 5/1.5mg tabs and 5mg/5ml liquid suspension).
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.
- Monitor for development of a worsening cough, labored breathing, exercise intolerance or collapse episodes.

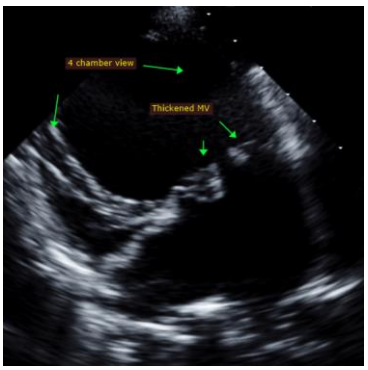
PLAN

- A renal panel is recommended in 1-2 weeks, then every 3-4 months lifelong.
- A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

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. 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.

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

Echocardiogram performed by: Pamela Harrigan, RDCS
Pet Animal Ultrasound Service (4paus.com)