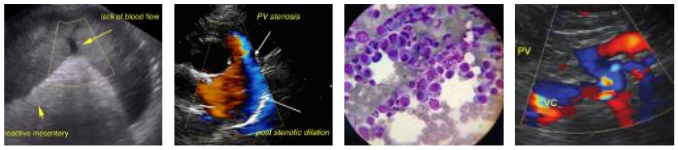
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Cujo Escalona

SPECIES
Canine

BREED
Pomeranian

SEX
Male Neutered

AGE
9 years

WEIGHT
7lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
G. Ferrer, DVM

HOSPITAL NAME
Paseos Veterinary Center

REFERRING VET
Dr. Ferrer

INVOICE
24522

DATE
6/1/22

PRESENTING CLINICAL SIGNS

History: Presented to evaluate agitation, increase respiratory rate, and coughing. History of a heart murmur and an echocardiogram was last done in August 2021 and no medications were started. Started to cough and having hacking last night and was depressed all day yesterday. Decrease appetite but started to eat. Seems agitated and having fatigued. NO VD. PE: Grade 4/6 systolic HM in both sides. Minimal crackles were auscultated. Sensitivity on tracheal palpation with hacking on palpation.
-Abnormal PE/Chem/CBC/UA Results: CHEM: WNL CBC: HCT: 63% (37-61), Mcv 80 (61-73).
-Blood pressure: 170/94 mean 119 164/116 mean 129 192/95 mean 122mmHg.
*Between the time of the exam and report generation, patient decompensated, experienced cardiac arrest and was resuscitated. Received Furosemide and Pimobendan and is improved in oxygen.

ECHOCARDIOGRAM FINDINGS

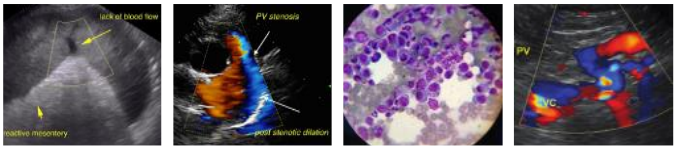
2D, m-mode, color flow and doppler imaging is available. The mitral valve is markedly thickened (ant>post) with significant prolapse into the left atrial lumen. A ruptured chordae tendineae is visualized. There is severe mitral regurgitation present. There is severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. No AI. The main pulmonary artery is prominent. Mild right heart enlargement. The tricuspid valve is mildly thickened with mild 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	5.5	2.5	NM	2.5	62	90	NM
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	174	0.5	0.7	3.2	2.0	2.6	1.0
*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)
				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)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Cujo Escalona

SPECIES
Canine

BREED
Pomeranian

SEX
Male Neutered

AGE
9 years

WEIGHT
7lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
G. Ferrer, DVM

HOSPITAL NAME
Paseos Veterinary Center

REFERRING VET
Dr. Ferrer

INVOICE
24522

DATE
6/1/22

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with evidence of significant progression. Severe mitral and mild tricuspid regurgitation are noted. Severe left atrial and mild ventricular enlargement confers an elevated risk for spontaneous congestive heart failure. The finding of a ruptured chordae tendineae dramatically raises this risk and likely explains acute decompensation. No additional issues such as pulmonary hypertension or systolic dysfunction are identified.

Respiratory signs are likely due to CHF. Based upon these findings, recommend continued hospitalization with IV Lasix, oral Pimobendan and supportive care until stable. If the cough persists despite institution of diuretic therapy, more aggressive hydrocodone may be indicated for a mechanical component.

If able to be stabilized, 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.

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.

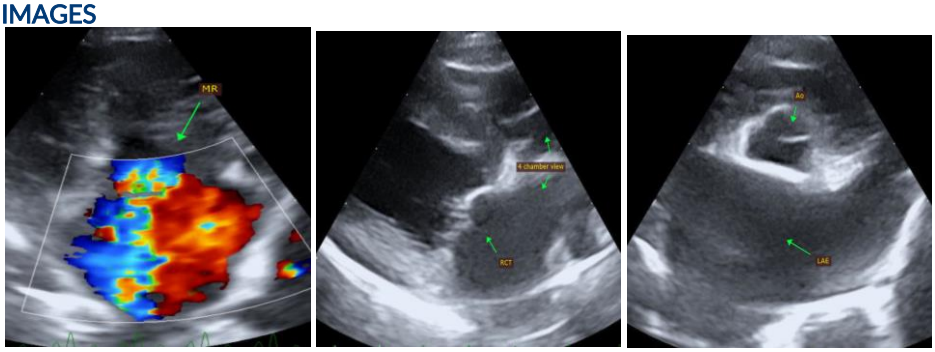
PLAN

Continue hospitalization, injectable Lasix and oxygen therapy until stabilized. Discharge on the following: administer Lasix/furosemide 1-2 mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Administer Pimobendan 0.3mg/kg PO q12h.

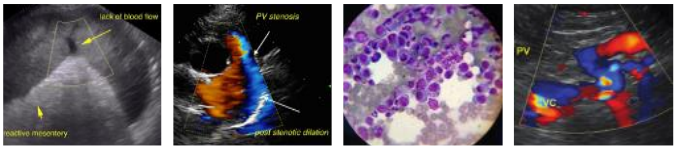
A renal panel and BP are recommended in 10-14 days following the above medication changes, then every 3-4 months lifelong on diuretics. If doing well and BP is >130mmHg, consider ACE-I 0.5mg/kg PO q12h. If cough persists and RR is normal, consider addition of hydrocodone with homatropine if needed for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

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

IMAGES



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Cujo Escalona

SPECIES
Canine

BREED
Pomeranian

SEX
Male Neutered

AGE
9 years

WEIGHT
7lbs

INTERPRETED BY
Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY
G. Ferrer, DVM

HOSPITAL NAME
Paseos Veterinary Center

REFERRING VET
Dr. Ferrer

INVOICE
24522

DATE
6/1/22

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