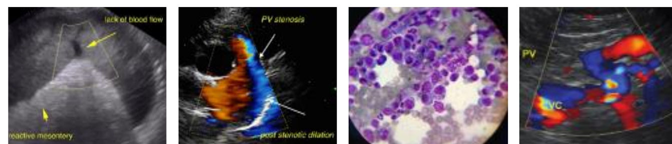
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Jitterbug Churchill

SPECIES
Feline

BREED
DLH

SEX
Male Neutered

AGE
13 years

WEIGHT
NP

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

IMAGING PERFORMED BY
Dana Alterman, RDCS, LVT

HOSPITAL NAME
Eubank Animal Clinic

REFERRING VET
Dr. Martin

INVOICE
27826

DATE
12/5/22

PRESENTING CLINICAL SIGNS

History: Gallop rhythm. Renal disease. BP: 158mmHg.
-Current medications: Solensia.
-CXR report: Moderate to severe cardiomegaly with LAE. No CHF. Cranial ventral mediastinal mass.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 50mm/s, 20mm/mV. The average heart rate is 200bpm with a largely regular rhythm. P waves are inverted, consistent with atypical device orientation. The P and QRS morphologies are positive. A single VPC is identified. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with a single VPC.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with moderate septal hypertrophy and mild free wall thickening. Adequate systolic function. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are remodeled and mildly hypertrophied. The mitral valve is normal with trace MR. The left atrium is moderately dilated and bulbous in appearance with a horizontal component. No obvious smoke. The right atrium is normal. Tricuspid valve is normal with no TR. The right ventricle appears normal. The LVOT and RVOT are normal in velocity. No aortic insufficiency. No pericardial effusion seen. No pleural effusion. No obvious cardiac tumors. A hypoechoic lesion is measured cranial to the cardiac window (see below).

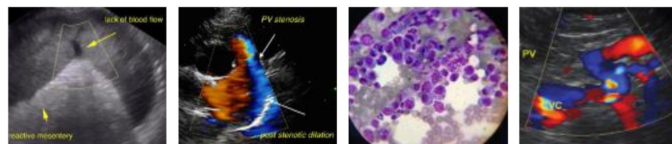
CARDIAC CHART

FELINE CARDIAC PARAMETERS	**BODY WEIGHT** (kg)	**HR** (BPM)	**IVSd** (cm) (Moise, Pipers)	**LVIDd** (cm) (Moise, Pipers)	**LVWd** (cm) (Moise, Pipers)	**FS** (%)	**EF** (%)
NORMAL PARAMETER	------	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	NP	NM	0.73	1.1	0.60	36	70
FELINE CARDIAC PARAMETERS	**LA/AO** (Boon)	**LA/AO HEART BASE (Swe)** (Abbott)	**LA** 2D short axis Base view (cm) (Abbott)		**LVOT VEL** (m/s)	**RVOT VEL** (m/s)	**E max** (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	1.6	1.8	1.8		1.1	0.8	NM

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
Adapted from June Boon, Veterinary Echocardiography,1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

HCM is a rule out diagnosis once hypertension and hyperthyroid disease have been ruled out. Both should be considered in this case. Regardless, moderate left atrial enlargement is present in addition to significant LV hypertrophy. The lesion seen on chest radiographs is most likely identified as a fluid-filled lesion, most consistent with a mediastinal cyst. These can be seen in cats and are typically benign and non-progressive. In this cat this is considered an incidental



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finding. FNA can be considered to confirm, and drainage should be considered should the lesion increase significantly in dimension or presumably lead to space-occupying respiratory issues. No obvious additional issues are identified.

The ECG does show a sinus rhythm with a single VPC. A single abnormal beat is of little concern in a stressed patient in hospital. Follow up is advised should any signs of sustained arrhythmias be noted in the future (acute syncope/collapse).

Given the finding of left atrial dilation, there is risk for progression in the future and medications can be considered for theoretic benefit. It is important to note that no medications have been shown to change outcome at this stage of disease. Pending blood pressure measurement >130mmHg, an ACE-I would be reasonable. Additionally, Plavix may be reasonable given atrial dilation to help decrease the risk of a blood clot event in the future. If there is difficulty or reluctance to medicate at home, simple monitoring would be an alternative approach. Discussion with the owner is advised.

The long-term prognosis is guarded given the degree of disease seen here. There will always remain risk for progression to CHF and development of blood clots and/or sudden death in the future. Monitoring is certainly advised, particularly should any respiratory signs, collapse or significant lethargy be noted in the future.

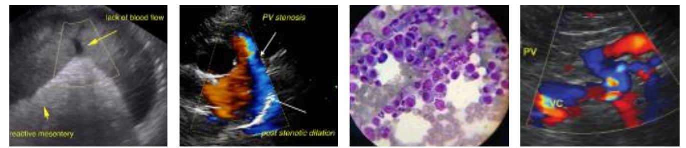
Anesthetic risk is considered moderate, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.

PLAN

Screening BP and T4 are recommended every 6 months. If elect to medicate, oral medications are as follows: Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute ACE-I 0.5mg/kg PO q12h.

A recheck echocardiogram is recommended in 6 months to assess progression.

IMAGES



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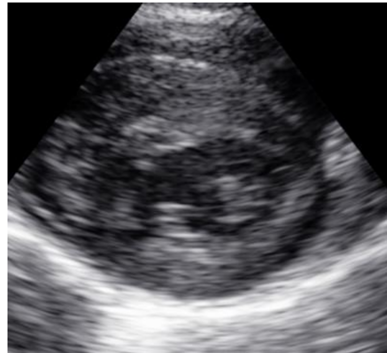

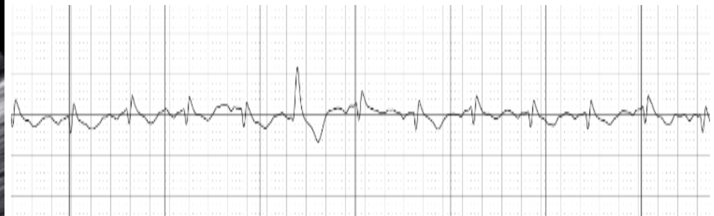

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
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