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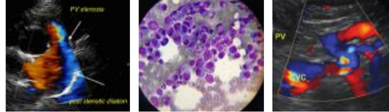

SonoPath
Clinical Sonography & Telecytology
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PATIENT
Lucky Yankellow

SPECIES
Feline

BREED
DSH

SEX
Male Neutered

AGE
11.1.09

WEIGHT
15lbs

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

HOSPITAL NAME
Harborside Mobile Veterinary Clinic

REFERRING VET
Dr. Hawkins

INVOICE
26245

DATE
9.7.22

PRESENTING CLINICAL SIGNS

History: Lethargic for one day. Previously heard grade 2/6 murmur; however, consistent auscultation is difficult given temperament. Sedated for exams.
-Pertinent abnormal PE/Chem/CBC/UA Results: ProBNP elevated at 1000.
-Current medications: None.
-Sedation used: Torbugesic.
-Pertinent previous ultrasound results: No previous.
-STAT: Offered and declined by DVM.
-Imaging performed by: Stephanie Warga RDCS, RVT.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with regions of borderline hypertrophy. There is a diffusely hyperechoic endocardium consistent with age-related fibrosis. Minimal remodeling. The papillary muscles are hyperechoic. The left atrium is moderately dilated. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No MR. The tricuspid valve appears normal in structure and mobility. No TR. The aortic root and ascending segment are markedly dilated. Suspicion for an aortic dissection, based upon 2D and color imaging (see below). The aortic valve appears tricuspid, although mildly asymmetrically thickened. Flow through the region is normal without obvious stenosis. Mild to moderate aortic insufficiency. In the region of the aortic arch an irregular hypoechoic lesion is noted with flow seen coursing around the abnormality. Blood flow through the RVOT is normal in velocity. No effusions. No obvious cardiac tumors.

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	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	6.8	NM	0.49	1.79	0.58	54	87
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	NM	1.9	1.7		1.4	0.7	NM

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

Unusual case. The primary abnormality identified is the finding of a suspect aortic dissection. This implies a tear in the inner layer of the aorta has occurred. The diagnosis is suspect, simply because this is extremely uncommon in small animals, particularly without any clinical signs. The aortic valve is mildly thickened, although tricuspid without a significant stenosis. There is also a lesion within the aortic arch of great concern, which is most consistent with a cardiogenic thrombus. Other rule outs include a mass or other abnormality. Blood flow can be seen bypassing the lesion, and is likely the cause of the murmur. As an additional issue, there is a significant aortic leak with mild to moderate AI. The LV wall is borderline in dimension without significant hypertrophy; however, the left atrium is moderately dilated indicating risk for complication going forward. No additional issues are identified.

Aortic dissection in people is thought to occur secondary to a genetic abnormality/predisposition. Exacerbating issues such as systemic hypertension should certainly be ruled out. Given the totality of the findings, this likely suggests some combination of the two. Unfortunately, due to patient temperament a blood pressure is not possible, and I would consider use of an ACE-I to lower systemic pressures regardless. Additionally, Pimobendan and Plavix are warranted, given significance of the findings with LA enlargement and the lesion within the aorta most consistent with a thrombus.

These findings certainly put the patient at risk for an aortic aneurysm, dislodgement of the lesion causing acute paralysis and/or sudden death and this should be expressed to the owner. Prognosis is guarded long-term. **Given the unusual findings in this case, referral for thoracic imaging is recommended (such as thoracic CT scan).**

Monitor at home for signs of cardiac compromise, including respiratory changes and/or signs of a blood clot event (paralysis, neurologic changes).

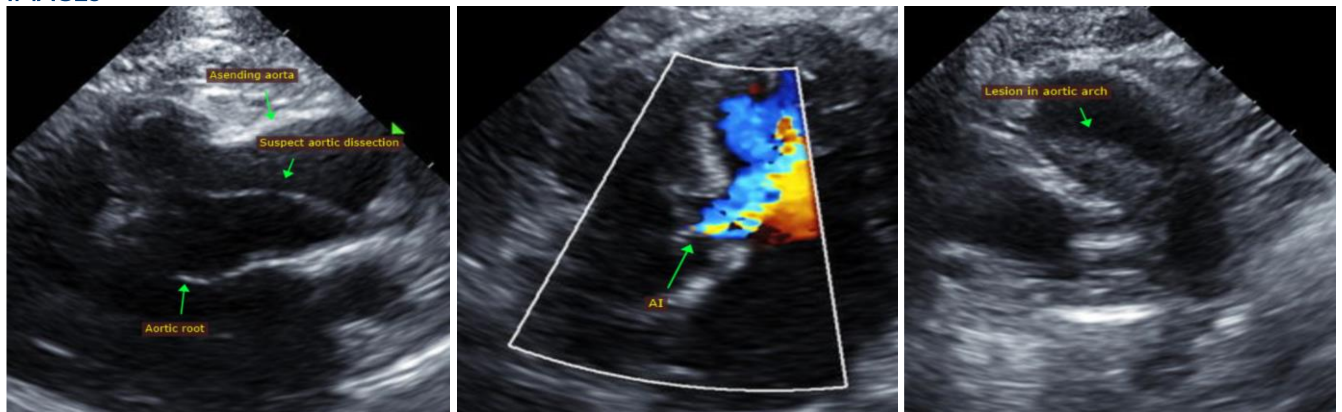
Anesthesia is not advised in this patient.

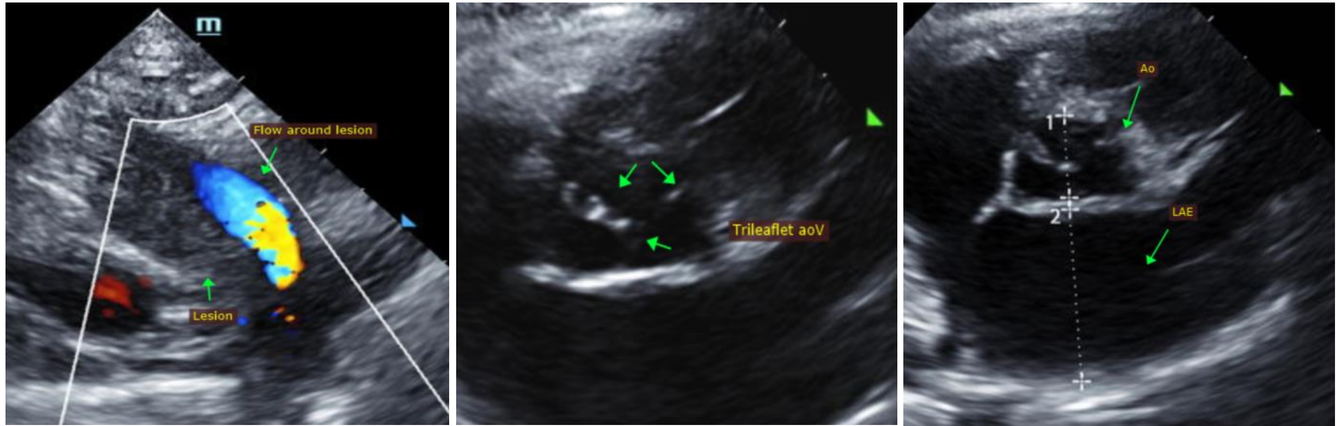
PLAN

Consider referral as discussed. If declined, institute Pimobendan 1.25mg PO q12h. Plavix 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety). Institute ACE-I 0.5mg/kg PO q12h.

Recommend recheck echocardiogram in 6 months, to screen for any progressive changes.

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.

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