

PATIENT

Hazel Horschel

SPECIES

Canine

BREED

Mix

SEX

Female Spayed

AGE

13 years

WEIGHT

38.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

A. Nicastro, DVM

HOSPITAL NAME

Veterinary Specialty
Care Blue Pearl Mt
Pleasant

REFERRING VET

Dr. Graham

INVOICE

31444

DATE

6/20/23

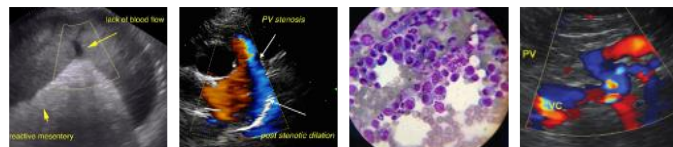
PRESENTING CLINICAL SIGNS

History: Presenting for trouble breathing. P has had a two-day history of lethargy and inappetence. Today, she began struggling to breathe and breathing 'hard' occasionally. P has not been willing to stand or walk a lot. O notes there was a 15-minute period within the last few hours when p seemed to be in severe respiratory distress- breathing extremely fast, panting, and with significant abdominal effort. E/d decreased. Bm/u normal. Vomited once a few days ago immediately following dinner. No c/s/d. RX: Galliprant (has been on for two weeks) Cerenia Mirtazapine Utd vaccines, hw, flea/tick prevention. Additional hx: Joint weakness/pain; o notes p is tender with putting weight on FR limb and occasionally struggles to stand, specifically with hind end; o notes rDVM did not believe this was due to arthritis (x-rays were taken within last few months to rule this out) RX: Galliprant (has been on for two weeks) Cerenia Mirtazapine Utd vaccines, hw, flea/tick prevention. Unasyn 30mg/kg IV q8h, Furosemide 4mg/kg IV, Lidocaine 2mg/kg IV x 2- converted from vtach to NSF- started lidocaine at 50ug/kg/min

-Abnormal PE/Chem/CBC/UA Results: CV - Severe tachyarrhythmia with pulse deficits LUNGS - Crackles and harsh sounds all lung fields. Watery/sanguineous fluid dripping from mouth (respiratory during triage exam) ABD - No masses/pain/abn on palpation DX: 3 view thoracic/abd rads- heavy interstitial/alveolar pattern cranial LL, moderate caudal LL R>> L Spondylosis lumbar spine Small volume ingesta in stomach, scant stool in colon. Radiology report: Mild left atrial enlargement with infiltrate in the lungs which could be associated with pulmonary edema and congestive heart failure, but the vasculature is not well seen to confirm. The possibility of concurrent pneumonia given the diffuse distribution of the infiltrate cannot be excluded. A diuretic trial could be attempted to determine if there is any response to therapy. PT/ARDS is also a consideration. Correlation with lab findings may be useful in assessment of possible concurrent pneumonia. Enlarged liver. This can be due to any kind of infiltrative process. Inflammatory, infectious or metabolic causes are most typical. Ultrasound may be helpful. Otherwise, normal abdomen. Degenerative changes of the spine. Chem17/CBC/Lytes- BG 206 (consider stress vs DM), BUN 47, Phos 7.7, SAP 525, CI 102, HCT 41.9, MCV 61, MCH 20.7, WBC 31.78k, neu 25k, Mono 3.53k, PLT 86k (smear confirmed 345k with lots of clumping) PT/PTT 11s/72s BP 170 sys Slide agg- neg ECG- vtach HR 300-330- resolved with lidocaine administration FAST- no effusions any body cavity, blines throughout lung fields. No other overt pathology noted. RR 90, ++/+++ effort, Temp 101, HR 300+, poor pulses/not able to feel any rhythm

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with minimal prolapse into the left atrial lumen. Moderate anterior-directed mitral regurgitation with mild left atrial dilation. Normal LV diameter with mildly depressed myocardial function. The tricuspid valve appears normal with mild tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses. Normal sinus rhythm throughout (ECG attached).



PATIENT

CARDIAC CHART

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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	NM	2.5	NM	1.45	26	50	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	NM	1.0	0.8	17.3	2.9	3.9	2.9
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

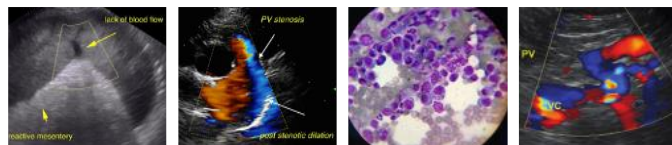
Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Lack of left atrial enlargement indicates the current risk for complication is low. Mild LV dysfunction is noted, which is likely secondary to the recent tachyarrhythmia. No additional issues are identified.

These findings would suggest structural disease is not the cause of development of ventricular tachycardia, as is seen with dilated cardiomyopathy or similar phenotypes. This patient likely has two separate issues. Follow up and treatment of the arrhythmia should be dictated by the ECG report, although a sinus rhythm is noted throughout the study. Pimobendan is recommended due to concurrent arrhythmic disease, in addition to mild structural changes.

The chest radiograph report is inconsistent with typical CHF, although it is listed as a possibility. With mild structural changes seen here, this is considered unlikely. That being said, rapid arrhythmias can lead to acute decompensation, and covering all respiratory bases in this case while controlling the arrhythmia is recommended. Repeat CXR are recommended if the respiratory changes persists or recur and a Lasix trial can always be instituted to assess response.

Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthesia is not advised until the patient is stabilized.



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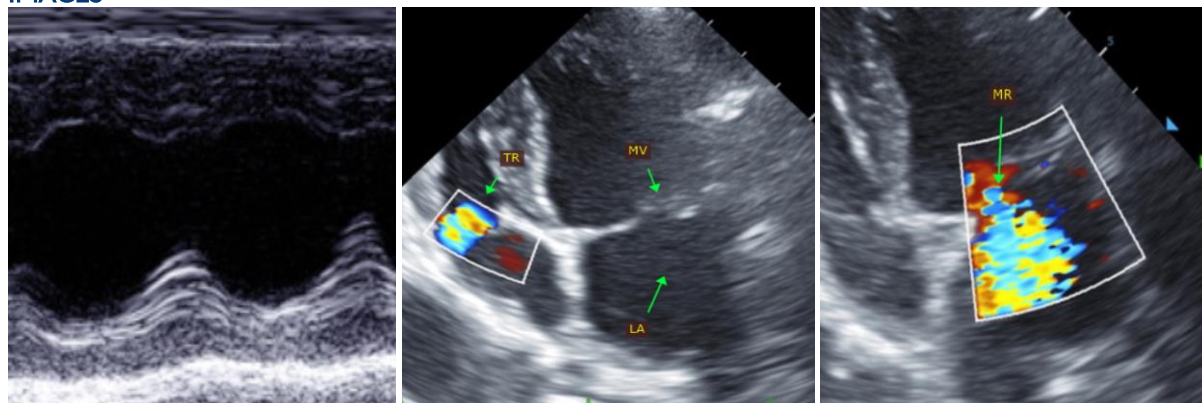
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PLAN

Institute Pimobendan 0.3mg/kg PO q12h. Baseline BP is recommended. Cover respiratory pulmonary bases. If respiratory signs do not respond favorably in the acute phase despite good arrhythmia control, repeat CXR +/- a Lasix trial is recommended. Follow up for the ECG should be dictated by the ECG report.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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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info@sonopath.com