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Clinical Sonography & Telecytology
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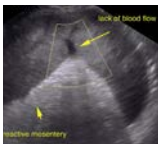
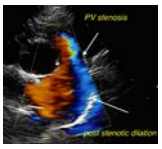
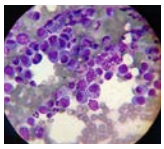
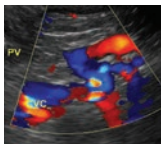

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1-800-838-4268 info@sonopath.com

PATIENT
Bella Kowalski

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
16 Years

WEIGHT
5.4 Pounds

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Kim Liedberg

HOSPITAL NAME
SVS Imaging

REFERRING VET
Grrendale Village Vet

INVOICE
24671

DATE
8/13/21

PRESENTING CLINICAL SIGNS

Bella came in for a senior wellness exam and was having difficulty breathing with rapid weight loss. She had 45cc of pink milky fluid removed on 7/9/2021. CXR revealed a moderate lack of detail. Advised to have an echocardiogram.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		162	0.61	1.12	0.60	44.6	79.4

FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60
PATIENT	--	1.2	0.70	--	--	NM

Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure with no evidence of "smoke" or thrombi. The cranial and caudal **mitral** valve leaflets appeared mildly thickened with some insufficiency noted on Doppler. The **left ventricle** presented excessive free wall and septal thicknesses with hypertrophic thicknesses compared to normal for this species. The **myocardium** presented essentially normal echogenicity without immediate signs of fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate for the patient and species evidenced by the fractional shortening measurement. The **left ventricular outflow** tract demonstrated turbulent laminar flow. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. Scant pericardial effusion noted without evidence of adverse hemodynamic effects on the heart. Pericardial to cranial thoracic pleural effusion with suspected cystic thoracic mass lesion measuring approximately 6.6 cm x 5.2 cm was present. The pleural effusion and suspected cystic thoracic mass contain primarily anechoic fluid without overt evidence of a cellular component.

ULTRASONOGRAPHIC FINDINGS

- Hypertrophic cardiomyopathy – subjectively compensated
- Primarily anechoic pleural effusion, suspect cystic thoracic mass lesion
- Scant pericardial effusion

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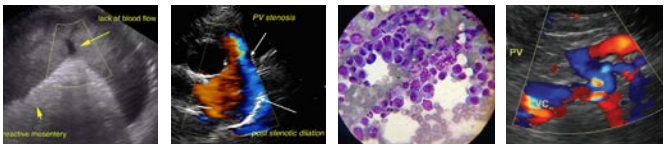

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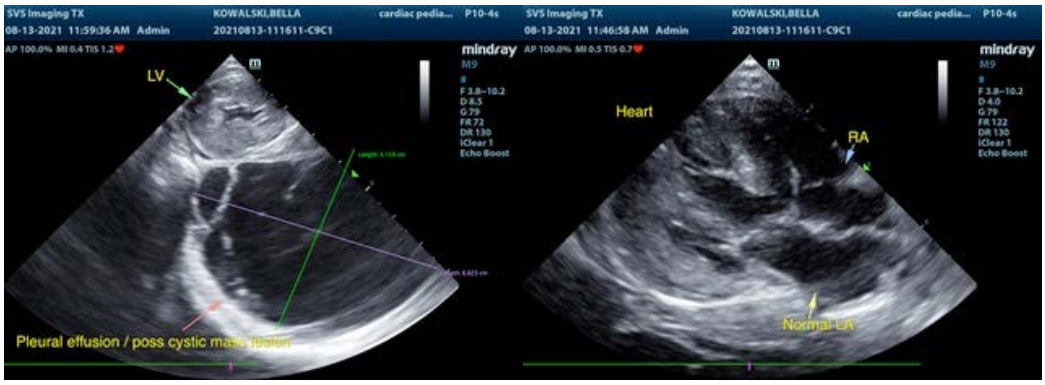
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diagnosis of HCM is a rule out diagnosis assuming no evidence of systemic hypertension, adequate hydration, and without evidence of a fixed or dynamic left ventricular outflow tract obstruction. Regardless of classification, the lack of left atrial enlargement, left heart volume overload, as well as no evidence of systolic dysfunction or clinical pulmonary hypertension indicate that the pleural effusion in this patient is non-cardiogenic in origin. An overt cause of the pleural effusion and suspected cystic thoracic mass lesion was not overtly evident. However, primary concern for potential neoplastic disease is warranted given the age of the patient as well as reported rapid weight loss.

Further assessment may include effusion analysis, cytospin cytology, +/- culture and sensitivity if evidence of inflammatory cells. As-needed supportive care including oxygen supplementation and as-needed prophylactic thoracocentesis is likely indicated. Given these findings and the patient's clinical status, a very guarded to potentially or likely unfavorable long-term prognosis is warranted.



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. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com