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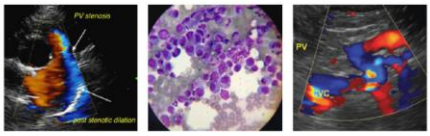
SVS Mobile Imaging 262 - 366 - 5970
fredgromalak@gmail.com

SVS IMAGING



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

PATIENT
Lola Monson

SPECIES
Canine

BREED
Miniature Schnauzer

SEX
FS

AGE
11yr

WEIGHT
17.9

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

IMAGING PERFORMED BY
Kim Liedberg

HOSPITAL NAME
SVS Imaging

REFERRING VET
Dr. Abraham, Beach Park

INVOICE
12230ag

DATE
11/22/2022

PRESENTING CLINICAL SIGNS

Presented for coughing and syncope. Radiographs reveal and enlarged heart with significant left atrium enlargement. Heart sounds muffled. No heart murmur noted. Started on Vetmedin. Cardiac work up to determine heart disease.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	<1.3	28-40	40-100	<0.6
PATIENT	5.0	2.0		2.6	46.7	81	0.34
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				
PATIENT	130	1.3	0.9		5.9	4.5	

Cardiac Presentation

The echocardiogram for this patient presented severe increased left atrial size with mild bulbous appearance expressed both in the LA/AO and LA max measurements. Marked deviation of the interatrial septum towards the right atrium suggestive of increased left atrial pressure was noted. The cranial and caudal mitral valve leaflets presented mild to moderate thickening consistent with endocardiosis. Doppler indicated measurable moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour and severe increased left ventricle volume. The myocardium presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. Contractility of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The left ventricular outflow tract demonstrated normal laminar flow and subjective structural integrity. The right atrium and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Tricuspid valvular assessment demonstrated concurrent thickening with mild TR on Doppler. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonic tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible pericardial or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window. no evidence of tachycardia or arrythmia.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM Stage C)
- Severe LA/LV enlargement consistent with left heart volume overload
- TR-estimated pulmonary pressure gradient <20 mmHg, not consistent with overt clinical pulmonary hypertension

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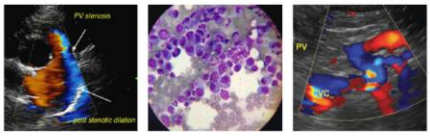

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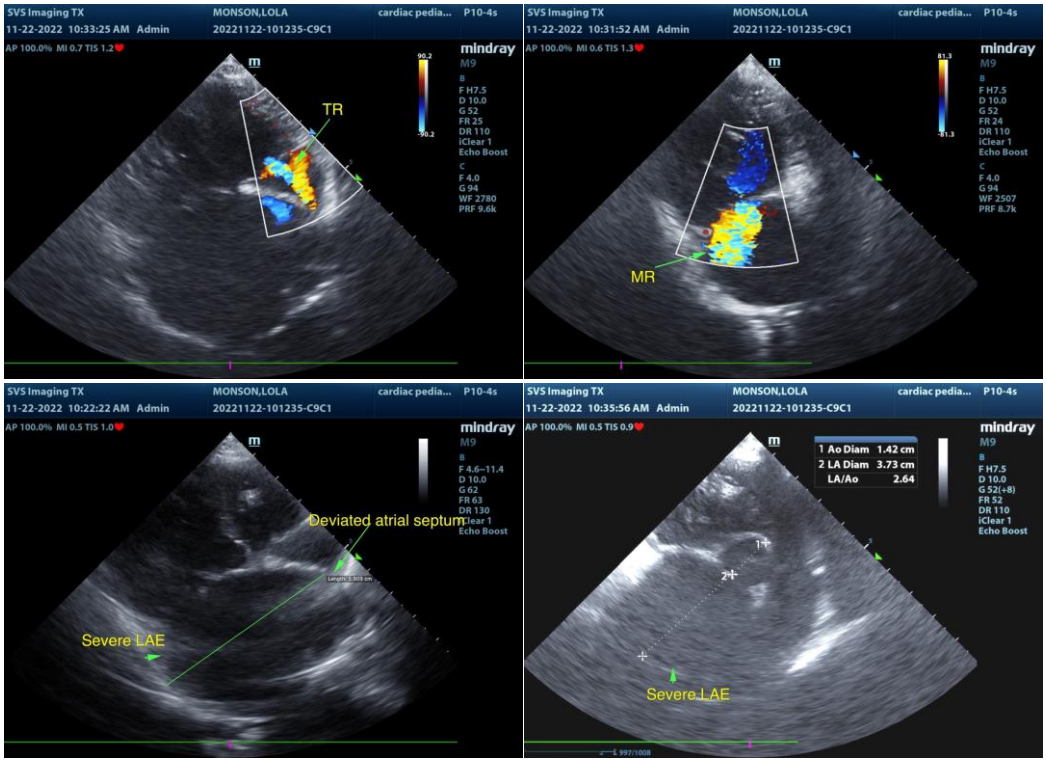
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although the cardiac presentation is most consistent with chronic progressive to severe degenerative valvular changes with secondary mitral valve and tricuspid valve insufficiency assessment of dietary history +/- taurine or troponin level if clinical history of grain free boutique or exotic diet or concern for myocarditis.

Pimobendan 0.3 mg/kg PO BID, Lasix/Spironolactone combination 1-2 mg/kg PO BID +/- ACE inhibitor medication if systemic BP >130 is recommended. ECG, monitoring of renal parameters and systemic BP is suggested as this patient is at increased risk for development of malignant arrythmias. Exercise restriction is advised. Omega e fatty acid and mild salt restriction may prove beneficial.

A very guarded to unfavorable long-term diagnosis is indicated. Sonographic monitoring is recommended for further assessment once on medications. Recheck echocardiogram suggested in 4-6 weeks, sooner if clinical signs consistent with CHF arise.



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. 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)

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