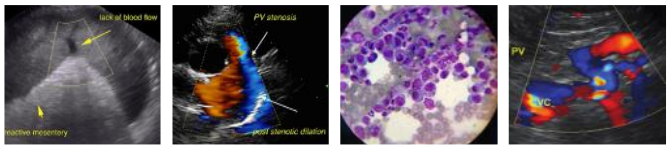
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Copper Gray

SPECIES
Canine

BREED
Chihuahua

SEX
M

AGE
17.5

WEIGHT
5

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

IMAGING PERFORMED BY
Tracy Nyberg

HOSPITAL NAME
Stuga North Veterinary Care

REFERRING VET
Tracy Nyberg

INVOICE
13619ag

DATE
04/28/2023

PRESENTING CLINICAL SIGNS

Receptionist from another clinic--desperately needs a dental. Managing mild azotemia, has been on vetmedin/lasix/enalapril over last 6 months for grade V mitral murmur, unneutered with what sounds like prostatitis and UTI's

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				2.0	50	85	0.3
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	NM	NM	NM		3.7	3.0	

Cardiac Presentation

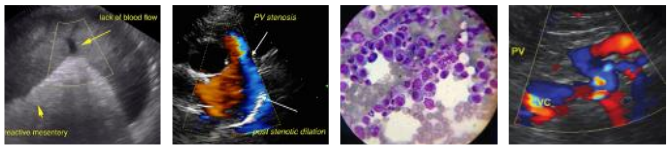
The echocardiogram for this patient presented excessive left atrial size expressed both in the LA/AO and LA max measurements. The cranial and caudal mitral valve leaflets presented moderate (anterior>posterior) thickening consistent with endocardiosis with mild septal leaflet prolapse. Doppler indicated moderate eccentric insufficiency. The left ventricle presented thicknesses with linear contour and moderate increased LV 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 adequate linear morphology. 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 overt arrythmia present.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B2) with mild mitral valve septal leaflet prolapse.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with mild mitral valve prolapse and secondary eccentric MR. The hemodynamic effects of the MR appear to be significant with evidence of emerging left heart volume overload. No other overt clinical issues such as LV systolic dysfunction



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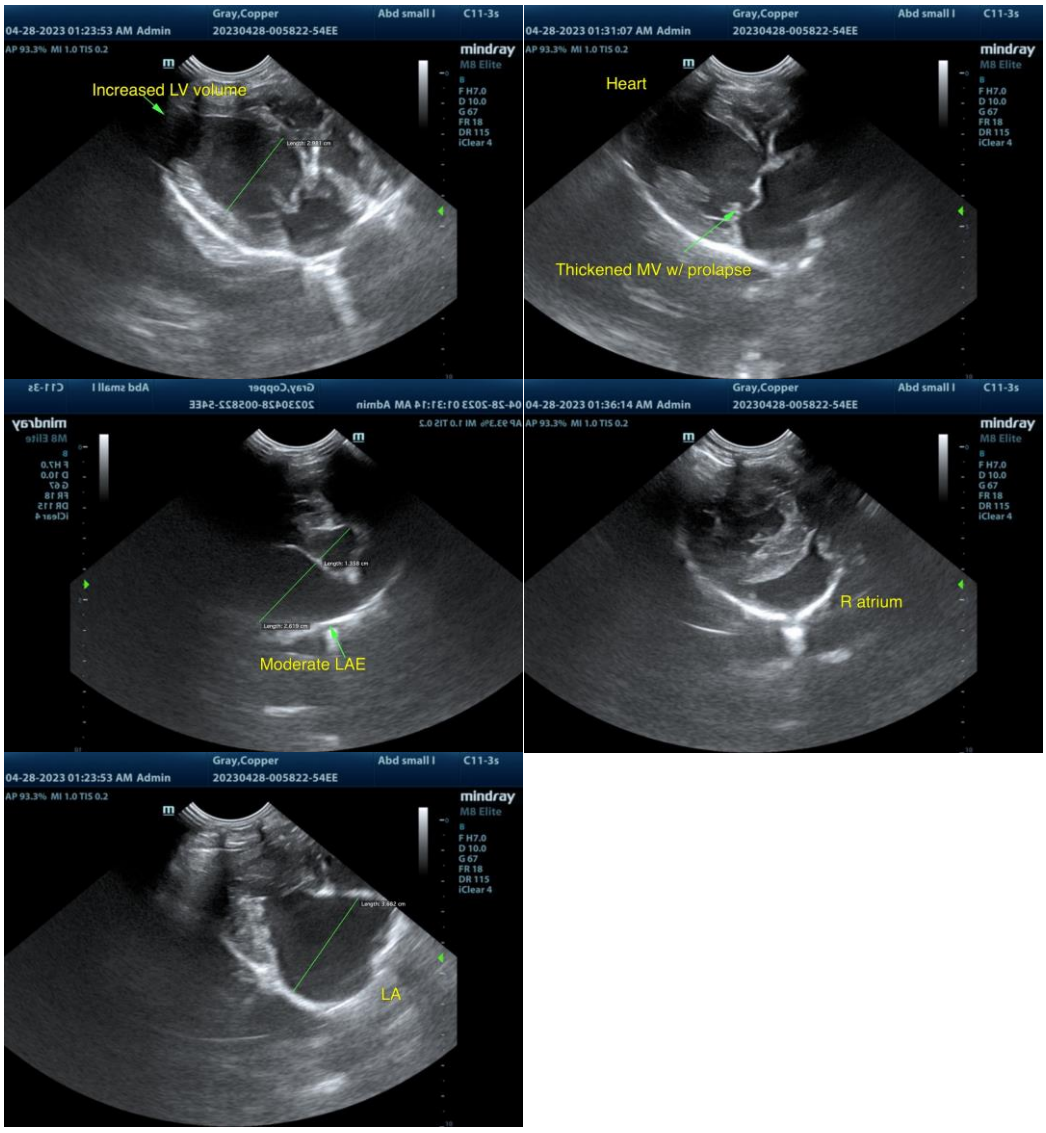
or obvious clinical pulmonary hypertension. Given no reported clinical signs such as increased resting RR or radiologic evidence of pulmonary edema, the heart appears to be currently stable.

Prognosis at this stage is extremely variable with the possibility of oncoming left sided congestive heart failure. Continued Vetmedin 0.3 mg/kg PO BID and Lasix/spironolactone combination both 1-2 mg/kg PO BID is warranted although close monitoring for progressive azotemia is advised. ACE inhibitor medication is suggested if systemic BP is >130 (not advised if systemic BP is <130).

Anesthetic risk is considered significantly elevated and with anesthesia not advised unless absolutely necessary. If anesthesia is considered essential the follow protocol is recommended with limits anesthetic time and reduced IVF use given strong concern for possible volume overload. Serial sonographic monitoring is recommended with concurrent continuous monitoring of resting RR. A recheck echocardiogram in 6 months, sooner if clinical signs 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

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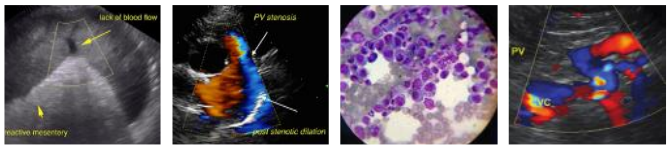

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visible in the image/video clips provided.

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)
mac.daniel@sonopath.com