SonoPath
Clinical Sonography & Telecytology
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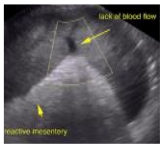
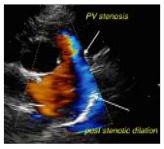
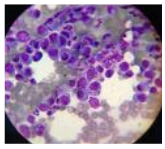
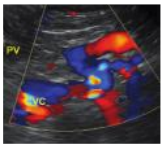

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Charlie Alleyne

SPECIES

Feline

BREED

DSH

SEX

MN

AGE

13 years

WEIGHT

19.8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

The Gentle Vet

REFERRING VET

Dr. Dulude

INVOICE

17250

DATE

7/14/23

PRESENTING CLINICAL SIGNS

Increased ProBNP. Needs cystotomy.

Current meds: Cisapride, Miralax

Abnormal PE/Chem/CBC/UA Results: Ca++ 11.7, Ca 1.46 - latrogenic (Hypercalcemia of Malignancy Panel normal) UA: ^Bact, Blood, WBC - has been on clava- recheck today SG: 1.036

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		102	0.61	1.45	0.53	55	86
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	1.2	1.3			1.1	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 enlarged **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented minor septal leaflet thickening yet overall normal kinetics. No overt systolic anterior motion of the mitral valve was noted. Mild eccentric MR was present on Doppler. The **left ventricular** septum and free wall revealed adequate contractility with normal LV volume, yet some mild remodeling of the septum and free wall were noted with borderline increased IVS dimension. This does not appear to be a functional issue, given normal lV contractility, and is most suggestive of age-related myocardial remodeling and potential fibrosis. The **left ventricular outflow** tract demonstrated subjective mild dynamic to turbulent systolic outflow with normal structural integrity. The **right atrium** and auricle revealed increased size and normal content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. Mild TR was noted 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). Normal measured RVOT velocity was noted. No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

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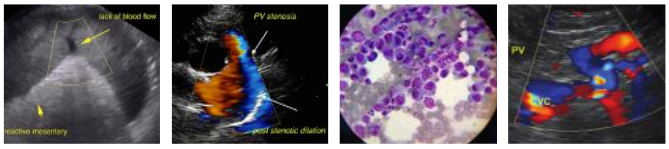

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ULTRASONOGRAPHIC FINDINGS

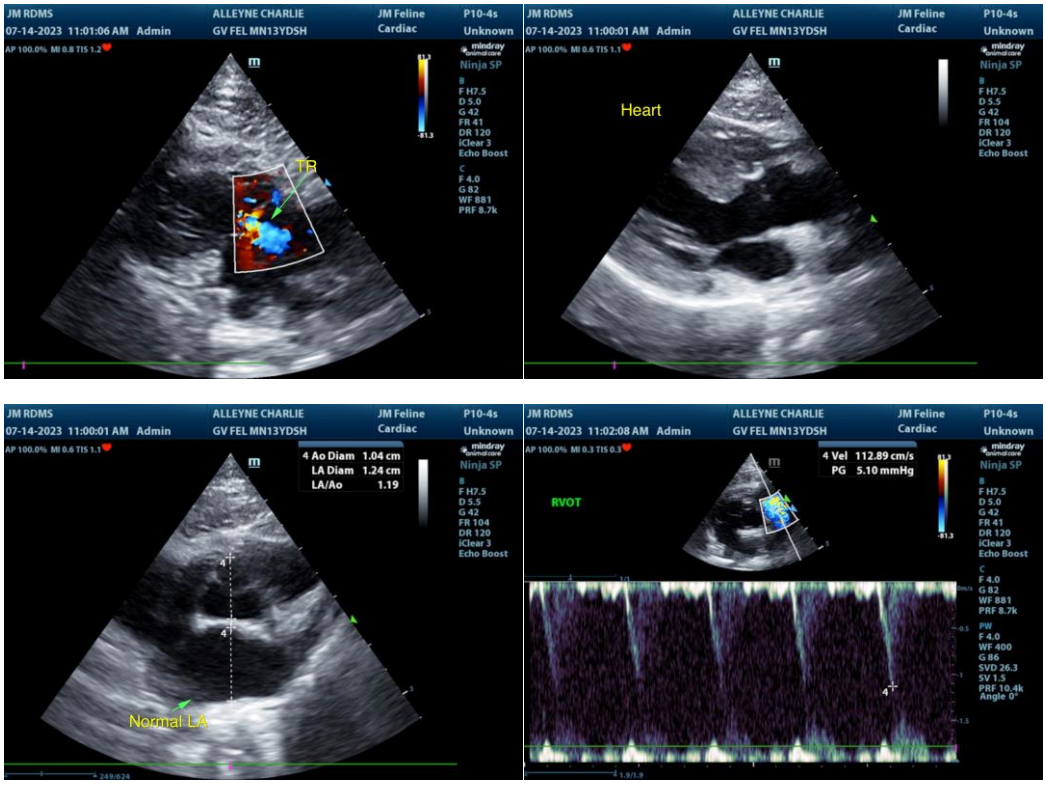
- Mild LV myocardial remodeling with borderline increased IVS thickness
- Normal LA / RA
- Subjective mildly thickened mitral valve
- Mild MR / TR

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, largely geriatric cardiac presentation was present without evidence of significant cardiomyopathy, i.e., left or right heart chamber enlargement, definitive HCM criteria, LV systolic dysfunction, significant valvular insufficiencies, or evidence of clinical pulmonary hypertension. If a murmur is present or detected in this patient, the hemodynamic effects of the murmur appear to be minimal, given the lack of left or right heart chamber enlargement.

There is no indication for cardiac medications or overt anesthetic contraindications, assuming normal systemic BP. Assessment of T4 levels is recommended if not recently done. Sonographic monitoring would be ideal to assess for progressive myocardial changes, specifically if clinical signs consistent with heart disease arise or if a murmur develops / increases in intensity. The following anesthetic protocol is recommended with appropriate IV fluid use under anesthesia.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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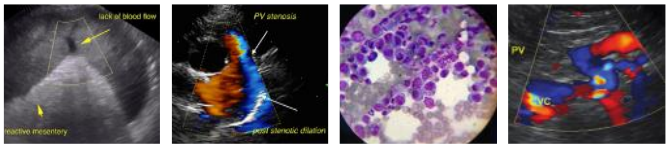

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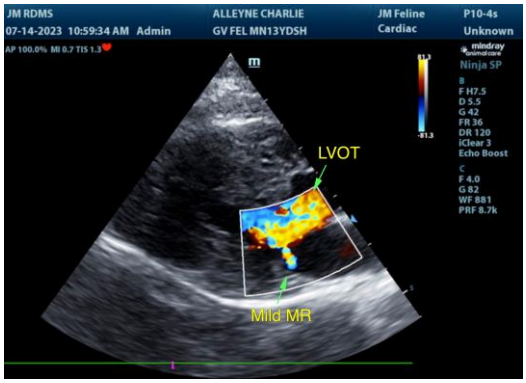

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com