



PATIENT

Tower Matta

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Neutered Male

AGE

10 Years

WEIGHT

23.8 Pounds

INTERPRETED BY

Sara Brethel DVM,
DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Gabriel Ferrer, DVM

HOSPITAL NAME

Pulse Pet Ultrasound
Services

REFERRING VET

Dr. Juan Ferrer

INVOICE

35025

DATE

12/22/25

PRESENTING CLINICAL SIGNS

History: Presented as a referral for an echocardiogram to evaluate a heart murmur and systemic hypertension. Pt was diagnosed with a heart murmur and also BP was done and showed hypertension. PT was prescribed Amlodipine and original dose was decreased and now taking amlodipine 2.5mg : 1/2 tablet SID.

Abnormal PE/Chem/CBC/UA Results: PE: grade 3/6 systolic HM Blood pressure measurements: taken at rDVM on Amlodipine SAP: 175, 183, 151, 185. Average 173mm/Hg DAP: 112, 107, 88, 86. Average 98mm/Hg MAP: 133, 132, 109, 119. Average 123mm/Hg.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	4.74	2.39	NM	1.3	43.92	--	Overest
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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	121	1.15	0.79	10.8	3.3	2.8	1.57

Cardiac Presentation

The mitral valve leaflets are mildly thickened with mild mitral regurgitation posteriorly directed. There is no prolapse of the mitral valve leaflet. The left atrial size is normal. Left ventricular internal dimensions during diastole are within normal limits and systolic function is preserved in the face of mitral regurgitation. There is normal right atrial size with mild tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension based upon tricuspid regurgitant velocities. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS



PATIENT

- Degenerative valve disease, ACVIM stage B-1
- Mild tricuspid regurgitation without evidence of pulmonary hypertension

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient has degenerative valve disease ACVIM stage B1 and no cardiac medications are indicated at this time. Since this can be a progressive condition, serial monitoring is recommended. A recheck echocardiogram is recommended in 6 months. A sooner recheck is recommended if the patient develops cardiovascular clinical signs or the heart murmur is worsening in intensity. Elective anesthetic procedures should be well tolerated.

The reported blood pressures are fairly variable. Recommend ensuring following ACVIM guidelines for taking the patient's blood pressure, i.e., recommend lateral recumbency using the nondependent limb, ideally a 4 limb is referred, either an oscillometric versus a doppler, ensuring the limb is straight forward at the level of the heart. If using oscillometric, making sure the pulse rate matches the actual patient's pulse rate to help ensure an accurate rate. If you're still obtaining blood pressures that are >160 mmHg systolic, then I would encourage increasing the amlodipine to ½ tablet twice per day. This blood pressure can be rechecked in the next 2-3 weeks.

The patient's blood work does show an elevated creatinine, with a normal BUN. Given that underlying azotemia is a common reason for patients to have systemic hypertension, recommend further investigation into the kidney values to help determine the underlying cause.

Standard perioperative fluid rates should be well-tolerated. Medications like dexmedetomidine and other alpha 2 agonists are best avoided. Ketamine is also best avoided. Anticholinergics can be used in the case of a clinically significant bradyarrhythmia (i.e., bradycardia with concurrent hypotension). If the patient is on an ACEi, recommend not giving this therapy the day of anesthesia. I recommend holding on elective anesthetic procedures until the patient's blood pressure is adequately controlled.



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.



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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.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com