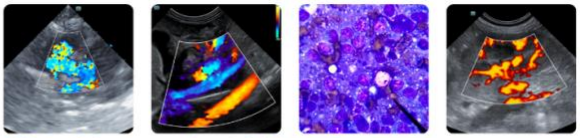




**PATIENT**

Buster Mason

**SPECIES**

Canine

**BREED**

Boxer

**SEX**

Intact Male

**AGE**

2 Years

**WEIGHT**

61.6 Pounds

**INTERPRETED BY**

Sara Brethel DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Kathleen Byrnes

**HOSPITAL NAME**

Chatham VS

**REFERRING VET**

Dr. Scott

**INVOICE**

35966

**DATE**

2/24/26

## PRESENTING CLINICAL SIGNS

History: P presented for Echo due to 4/6 murmur

## 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** | -- | -- | NM | 1.73 | 59.79 | -- | -- |
| **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** | 119 | 5.49 | 1.57 | 28 | 4.0 | 3.98 | 1.6 |

IVSd: 1.01, LVPWD: 1.1

### *Cardiac Presentation*

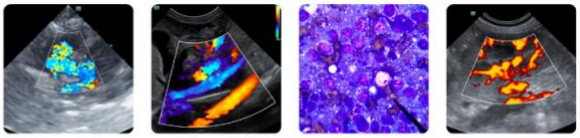
The mitral valve leaflets are normal. There is trivial mitral regurgitation. There is no prolapse of mitral valve leaflets. Left atrial size is normal. Short axis ratio is skewed due to the small aortic root. There is normal left ventricular systolic and diastolic function. There is mild evidence of left ventricular concentric hypertrophy. The right atrial size is normal with trivial tricuspid regurgitation. There is no prolapse of tricuspid valve leaflets and no evidence of pulmonary hypertension. Right ventricle is subjectively normal in structure and function. Pulmonic valve has normal morphology and normal corresponding outflow velocities. The aortic valve is trileaflet with mild thickening of the valve leaflets. There is severe increased velocity within the left ventricular outflow tract, consistent with severe aortic versus subaortic stenosis. The aorta has a post-stenotic dilation. Pulmonary artery and associated branches are normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

## ULTRASONOGRAPHIC FINDINGS

- Severe aortic vs. subaortic stenosis.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient has severe aortic versus subaortic stenosis. That is the source of the patient's heart murmur. This is a congenital condition. The patient was born with it. Given the patient being full





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grown, the severity of the condition should not progress, but the patient is in a severe category. With the velocities obtained, it's still possible for the patient to live a relatively normal lifespan. However, given the breed and the level of severity, there is a risk of patients passing away suddenly. I would recommend starting atenolol on this patient.

Atenolol therapy can be considered for this patient. When starting this medication, it is recommended to perform an up titration to help avoid the side effects that can be seen with beta blockade (ie: starting at 0.25mg/kg PO q24 then increasing in 0.25mg/kg increments until an optimal dose of 0.75mg/kg to 1mg/kg PO q12 is reached). Typically, I recommend 4 days in-between each dose adjustment. This is not a therapy that should be stopped abruptly as there can be serious side effects and this can be proarrhythmic. If stopping this medication, a gradual decrease is recommended similar to the uptitration when starting.

If the patient is to undergo anesthesia when on atenolol therapy, it is recommended to either give ½ the dose of atenolol OR do not give it the morning of anesthesia. Their normal dosing can resume the same evening of anesthesia as long as the patient is doing well.

Recommend obtaining a blood pressure on the patient to ensure it is <160mmHg. If the blood pressure is elevated recommend following ACVIM guidelines for systemic hypertension and treating if indicated.

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.

Due to the severe nature of the subaortic stenosis, prophylactic antibiotics should be given prior to elective anesthetic procedures 3-5 days prior, during, and post antibiotics, such as clavimox or cephalexin should be well tolerated. This is due to the increased risk for endocarditis given the affected aortic valve. 4-6 weeks after starting atenolol, a Holter monitor is recommended due to the increased risk for ventricular arrhythmias with this condition. Pending Holter results, a recheck echo is recommended in 6-12 months, sooner if cardiovascular clinical signs are developing. It is noted that the patient is intact and it is not recommended to breed this patient.

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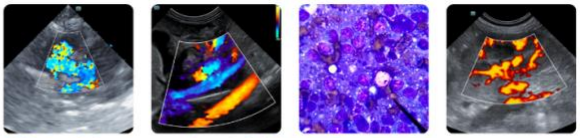

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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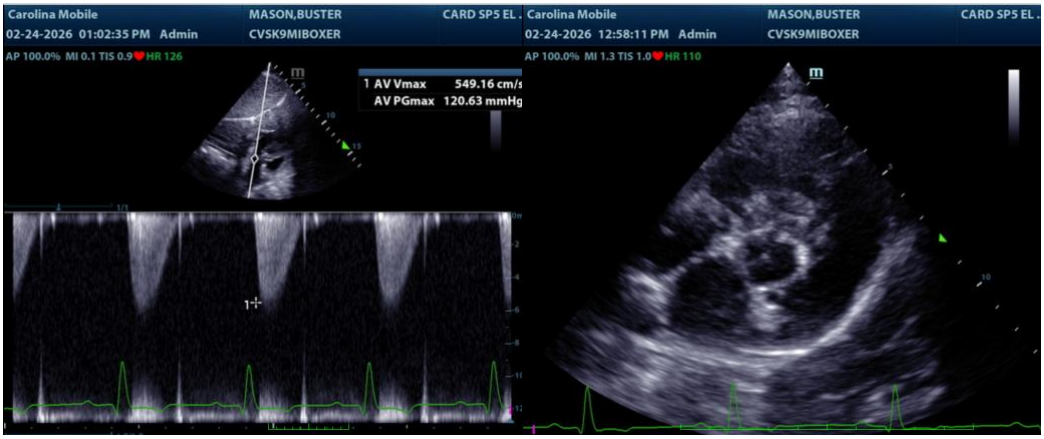


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com