**PATIENT**

Pepper Fur

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed Female

**AGE**

9 Years

**WEIGHT**

17.2 pounds

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

**IMAGING PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Centerville AH

**REFERRING VET**

Dr. Sandhu

**INVOICE**

14975

**DATE**

04/09/26

## PRESENTING CLINICAL SIGNS

Congenital HM noted since birth. Never staged. Grade 2 HM. Dental disease is present

Current Medications: Clavaseptin 250mg half tab BID

Abnormal PE/Chem/CBC/UA Results: labs attached BP 132/108 116 148/113 184 145/117 124 203/112 142 160/141 146

## 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 | 5.8 | -- | NM | 1.25 | 45 | 78 | 0.3 |
| **CANINE CARDIAC PARAMETERS** | **HR** (BPM) | **AV VMAX** (m/s) | **PV MAX** (m/s) | **BODY WEIGHT** (lbs) | **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 | NM | 1.6 | 1.4 | 17.2 | 3.0 | 3.3 | -- |

### *Cardiac Presentation*

The echocardiogram in this patient demonstrated normal **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening most suggestive of degenerative change/endocardiosis given the patient's age. Doppler indicated moderate eccentric MR. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. 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. Normal measured LVOT velocity. 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. No overt significant 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). Normal measured RVOT velocity. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of cardiac / pericardial tumors was visible. No evidence of arrhythmia.

## ULTRASONOGRAPHIC FINDINGS

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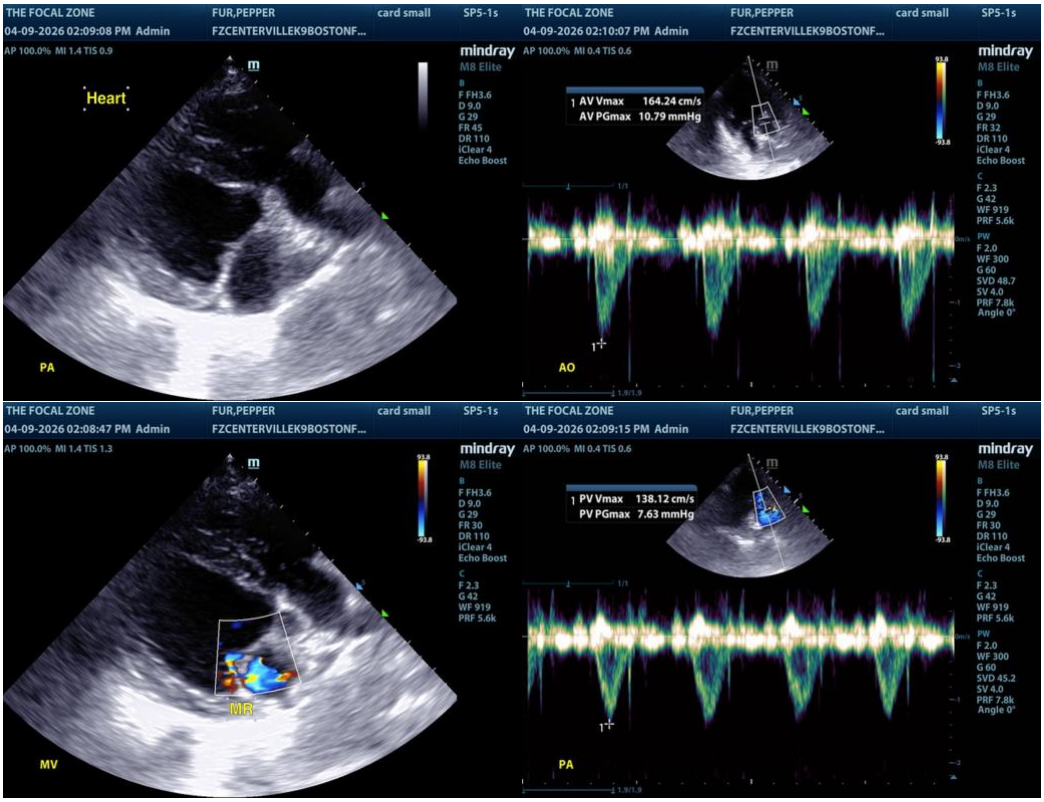
- Normal cardiac structure/function.
- Mitral valve insufficiency (B1).

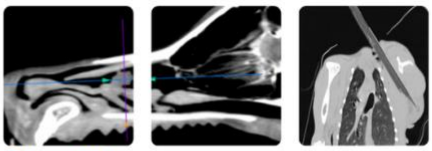
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with mild degenerative valvular changes and secondary eccentric MR, which essentially classifies as myxomatous mitral valve disease given age. No obvious evidence of congenital defect i.e. shunts or stenotic disease. The lack of cardiac chamber enlargement indicates the current and future risk of complication, secondary to the murmur and mitral valve insufficiency, is low.

In an unassumed non-clinical patient without evidence of chamber enlargement, no indication for cardiac medications. Conservative monitoring of the murmur going forward is advised. Recheck echo is suggested in six months, sooner if clinically indicated. Cardiac anesthetic risk is considered mild. If required, the following protocol is suggested. 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.




**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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**

info@SonoPath.com